

## SEARCH REQUEST FORM

Scientific and Technical Information Center

Requester's Full Name: BPIAN Marc Examiner #: 76173 Date: 1-27-03  
Art Unit: 1751 Phone Number 305-0720 Serial Number: 09/659 905  
Mail Box and Bldg/Room Location: CP3 9105 Results Format Preferred (circle): PAPER DISK E-MAIL

**If more than one search is submitted, please prioritize searches in order of need.**

\*\*\*\*\*

Please provide a detailed statement of the search topic, and describe as specifically as possible the subject matter to be searched. Include the elected species or structures, keywords, synonyms, acronyms, and registry numbers, and combine with the concept or utility of the invention. Define any terms that may have a special meaning. Give examples or relevant citations, authors, etc, if known. Please attach a copy of the cover sheet, pertinent claims, and abstract.

Title of Invention: Ether-capped poly(oxyalkylated) alcohol surfactantsInventors (please provide full names): 1) MARK Sivik 2) Bernard Kluesener  
3) Glenn JORDAN IV 4) William SchepferEarliest Priority Filing Date: 12-8-99

*\*For Sequence Searches Only\* Please include all pertinent information (parent, child, divisional, or issued patent numbers) along with the appropriate serial number.*

I Am Looking for ~~the~~ the compound defined  
In Instant claim 1.

-THANKS

27

\*\*\*\*\*

## STAFF USE ONLY

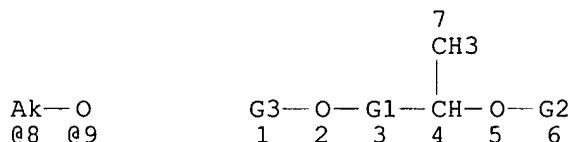
	Type of Search	Vendors and cost where applicable
Searcher: <u>Koroma RM</u>	NA Sequence (#) _____	STN <u>8</u>
Searcher Phone #: <u>305 3542</u>	AA Sequence (#) _____	Dialog _____
Searcher Location: <u>BS 1700</u>	Structure (#) <u>✓1</u>	Questel/Orbit _____
Date Searcher Picked Up: <u>1/29/03</u>	Bibliographic <u>✓</u>	Dr.Link _____
Date Completed: <u>1/29/03</u>	Litigation _____	Lexis/Nexis _____
Searcher Prep & Review Time: <u>15 min</u>	Fulltext _____	Sequence Systems _____
Clerical Prep Time: _____	Patent Family _____	WWW/Internet _____
Online Time: <u>1:15 min</u>	Other _____	Other (specify) _____

=&gt; d que

```

L1          1 SEA FILE=REGISTRY ABB=ON  PLU=ON  106-89-8/RN
L2          1 SEA FILE=REGISTRY ABB=ON  PLU=ON  25322-68-3/RN
L3          3310 SEA FILE=CAPLUS ABB=ON  PLU=ON  L1/D
L4          17281 SEA FILE=CAPLUS ABB=ON  PLU=ON  L2/D
L5          71 SEA FILE=CAPLUS ABB=ON  PLU=ON  L3 AND L4
L8          21723 SEA FILE=REGISTRY ABB=ON  PLU=ON  106-89-8/CRN
L10         9013 SEA FILE=REGISTRY ABB=ON  PLU=ON  25322-68-3/CRN
L11         213 SEA FILE=REGISTRY ABB=ON  PLU=ON  L8 AND L10
L12         185 SEA FILE=CAPLUS ABB=ON  PLU=ON  L11
L16         11 SEA FILE=CAPLUS ABB=ON  PLU=ON  L12 AND CAP?
L17         34 SEA FILE=CAPLUS ABB=ON  PLU=ON  L12 AND ETHER?
L18         3 SEA FILE=CAPLUS ABB=ON  PLU=ON  L5 AND ?CAPPED
L19         33 SEA FILE=CAPLUS ABB=ON  PLU=ON  L5 AND ETHER?
L20         77 SEA FILE=CAPLUS ABB=ON  PLU=ON  (L16 OR L17 OR L18 OR L19)
L21         11 SEA FILE=CAPLUS ABB=ON  PLU=ON  DETERGENTS/SC,SX AND L20
L22         46 SEA FILE=CAPLUS ABB=ON  PLU=ON  ETHER?(4A)CAP?(5A)SURFACTANT#
L24         31 SEA FILE=CAPLUS ABB=ON  PLU=ON  L22 AND (?OXYALKYL? OR
          ?OXYPROPYL? OR ?OXYETHYL? OR (?ETHYLENE? OR ?PROPYLEN?) (5A)OXID
          E#)
L25         24 SEA FILE=CAPLUS ABB=ON  PLU=ON  DETERGENTS/SC,SX AND L24
L26         33 SEA FILE=CAPLUS ABB=ON  PLU=ON  L25 OR L21
L31         SCR 2043
L33         STR

```



Ak @10

REP G1=(1-20) 8-2 9-4

VAR G2=CY/10

VAR G3=CB/10

NODE ATTRIBUTES:

CONNECT IS E1 RC AT 10

DEFAULT MLEVEL IS ATOM

DEFAULT ECLEVEL IS LIMITED

GRAPH ATTRIBUTES:

RING(S) ARE ISOLATED OR EMBEDDED

NUMBER OF NODES IS 10

STEREO ATTRIBUTES: NONE

```

L35         107 SEA FILE=REGISTRY SSS FUL L33 AND L31
L36         15 SEA FILE=REGISTRY ABB=ON  PLU=ON  L35 AND 1/NC
L37         15 SEA FILE=CAPLUS ABB=ON  PLU=ON  L36
L38         7 SEA FILE=CAPLUS ABB=ON  PLU=ON  L36 AND DETERGENTS/SC,SX
L39         9 SEA FILE=CAPLUS ABB=ON  PLU=ON  L37(L) (PREP OR IMF OR SPN)/RL
L40         42 SEA FILE=CAPLUS ABB=ON  PLU=ON  L38 OR L39 OR L26

```

KOROMA EIC1700

=> log hold

COST IN U.S. DOLLARS

SINCE FILE

TOTAL

ENTRY

SESSION

FULL ESTIMATED COST

162.13

447.94

DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS)

SINCE FILE

TOTAL

ENTRY

SESSION

CA SUBSCRIBER PRICE

-27.34

-27.34

SESSION WILL BE HELD FOR 60 MINUTES

STN INTERNATIONAL SESSION SUSPENDED AT 13:40:08 ON 29 JAN 2003

=> file reg

FILE 'REGISTRY' ENTERED AT 13:38:27 ON 29 JAN 2003  
USE IS SUBJECT TO THE TERMS OF YOUR STN CUSTOMER AGREEMENT.  
PLEASE SEE "HELP USAGETERMS" FOR DETAILS.  
COPYRIGHT (C) 2003 American Chemical Society (ACS)

Property values tagged with IC are from the ZIC/VINITI data file  
provided by InfoChem.

STRUCTURE FILE UPDATES: 28 JAN 2003 HIGHEST RN 482573-45-5  
DICTIONARY FILE UPDATES: 28 JAN 2003 HIGHEST RN 482573-45-5

TSCA INFORMATION NOW CURRENT THROUGH MAY 20, 2002

Please note that search-term pricing does apply when  
conducting SmartSELECT searches.

Crossover limits have been increased. See HELP CROSSOVER for details.

Experimental and calculated property data are now available. See HELP  
PROPERTIES for more information. See STNote 27, Searching Properties  
in the CAS Registry File, for complete details:  
<http://www.cas.org/ONLINE/STN/STNOTES/stnotes27.pdf>

=> file caplus

FILE 'CAPLUS' ENTERED AT 13:38:31 ON 29 JAN 2003  
USE IS SUBJECT TO THE TERMS OF YOUR STN CUSTOMER AGREEMENT.  
PLEASE SEE "HELP USAGETERMS" FOR DETAILS.  
COPYRIGHT (C) 2003 AMERICAN CHEMICAL SOCIETY (ACS)

Copyright of the articles to which records in this database refer is  
held by the publishers listed in the PUBLISHER (PB) field (available  
for records published or updated in Chemical Abstracts after December  
26, 1996), unless otherwise indicated in the original publications.  
The CA Lexicon is the copyrighted intellectual property of the  
American Chemical Society and is provided to assist you in searching  
databases on STN. Any dissemination, distribution, copying, or storing  
of this information, without the prior written consent of CAS, is  
strictly prohibited.

FILE COVERS 1907 - 29 Jan 2003 VOL 138 ISS 5  
FILE LAST UPDATED: 28 Jan 2003 (20030128/ED)

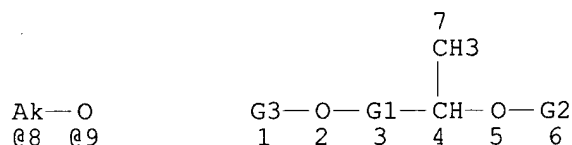
This file contains CAS Registry Numbers for easy and accurate  
substance identification.

=> d que

L1	1	SEA	FILE=REGISTRY	ABB=ON	PLU=ON	106-89-8/RN
L2	1	SEA	FILE=REGISTRY	ABB=ON	PLU=ON	25322-68-3/RN
L3	3310	SEA	FILE=CAPLUS	ABB=ON	PLU=ON	L1/D
L4	17281	SEA	FILE=CAPLUS	ABB=ON	PLU=ON	L2/D
L5	71	SEA	FILE=CAPLUS	ABB=ON	PLU=ON	L3 AND L4
L8	21723	SEA	FILE=REGISTRY	ABB=ON	PLU=ON	106-89-8/CRN
L10	9013	SEA	FILE=REGISTRY	ABB=ON	PLU=ON	25322-68-3/CRN
L11	213	SEA	FILE=REGISTRY	ABB=ON	PLU=ON	L8 AND L10
L12	185	SEA	FILE=CAPLUS	ABB=ON	PLU=ON	L11
L16	11	SEA	FILE=CAPLUS	ABB=ON	PLU=ON	L12 AND CAP?

KOROMA EIC1700

L17 34 SEA FILE=CAPLUS ABB=ON PLU=ON L12 AND ETHER?  
 L18 3 SEA FILE=CAPLUS ABB=ON PLU=ON L5 AND ?CAPPED  
 L19 33 SEA FILE=CAPLUS ABB=ON PLU=ON L5 AND ETHER?  
 L20 77 SEA FILE=CAPLUS ABB=ON PLU=ON (L16 OR L17 OR L18 OR L19)  
 L21 11 SEA FILE=CAPLUS ABB=ON PLU=ON DETERGENTS/SC,SX AND L20  
 L22 46 SEA FILE=CAPLUS ABB=ON PLU=ON ETHER?(4A)CAP?(5A)SURFACTANT#  
 L24 31 SEA FILE=CAPLUS ABB=ON PLU=ON L22 AND (?OXYALKYL? OR  
 ?OXYPROPYL? OR ?OXYETHYL? OR (?ETHYLENE? OR ?PROPYLEN?) (5A)OXID  
 E#)  
 L25 24 SEA FILE=CAPLUS ABB=ON PLU=ON DETERGENTS/SC,SX AND L24  
 L26 33 SEA FILE=CAPLUS ABB=ON PLU=ON L25 OR L21  
 L31 SCR 2043  
 L33 STR



Ak @10

REP G1=(1-20) 8-2 9-4  
 VAR G2=CY/10  
 VAR G3=CB/10  
 NODE ATTRIBUTES:  
 CONNECT IS E1 RC AT 10  
 DEFAULT MLEVEL IS ATOM  
 DEFAULT ECLEVEL IS LIMITED

GRAPH ATTRIBUTES:  
 RING(S) ARE ISOLATED OR EMBEDDED  
 NUMBER OF NODES IS 10

STEREO ATTRIBUTES: NONE

L35 107 SEA FILE=REGISTRY SSS FUL L33 AND L31  
 L36 15 SEA FILE=REGISTRY ABB=ON PLU=ON L35 AND 1/NC  
 L37 15 SEA FILE=CAPLUS ABB=ON PLU=ON L36  
 L38 7 SEA FILE=CAPLUS ABB=ON PLU=ON L36 AND DETERGENTS/SC,SX  
 L39 9 SEA FILE=CAPLUS ABB=ON PLU=ON L37(L) (PREP OR IMF OR SPN)/RL  
 L40 42 SEA FILE=CAPLUS ABB=ON PLU=ON L38 OR L39 OR L26

=> d ibib abs hitstr ind total

L40 ANSWER 1 OF 42 CAPLUS COPYRIGHT 2003 ACS

ACCESSION NUMBER: 2002:728862 CAPLUS

DOCUMENT NUMBER: 137:264743

TITLE: Phenyl **ether** group-free reactive surfactants  
 and their use as emulsifier in emulsion  
 polymerization, as dispersants in suspension  
 polymerization, and as modifiers for polymers

INVENTOR(S): Goda, Tetsuya; Kobayashi, Kazushi; Komiya, Kaoru

PATENT ASSIGNEE(S): Asahi Denka Kogyo K. K., Japan

SOURCE: Jpn. Kokai Tokkyo Koho, 15 pp.

KOROMA EIC1700

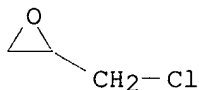
DOCUMENT TYPE: CODEN: JKXXAF  
 LANGUAGE: Patent  
 FAMILY ACC. NUM. COUNT: 1 Japanese  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2002275115	A2	<del>20020925</del>	JP 2001-79389	20010319
PRIORITY APPLN. INFO.:			JP 2001-79389	20010319

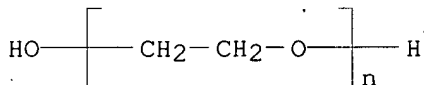
AB Title surfactants, which show good surfactant properties as Ph group-contg. ones without causing environmental pollution, are represented as the general formula  $\text{HCR}_6\text{:CR}_5(\text{CH}_2)_m(\text{CO})_s\text{OCR}_1\text{R}_2\text{CR}_3\text{R}_4\text{O}(\text{AO})_n\text{X}$  (I:  $\text{R}_1\text{-R}_4 = \text{H}$ , alkyl;  $\text{R}_5, \text{R}_6 = \text{H}$ , Me;  $\text{AO} = \text{C}_2\text{-4 oxyalkylene}$ ;  $\text{X} = \text{H}$ , ionic hydrophilic group;  $s = 0, 1$ ;  $m = 0\text{-}12$ ;  $n = 0\text{-}1000$ ; .gtoreq.2 of  $\text{R}_1\text{-R}_4 = \text{linear alkyl}$  or .gtoreq.1 of  $\text{R}_1\text{-R}_4 = \text{branched alkyl}$ ). The surfactants are useful in imparting water resistance, heat stability, and antistatic and antifogging properties, etc., to polymers. Thus, isopentadecene oxide was reacted with allyl alc. and successively reacted with ethylene oxide to give I ( $\text{CR}_1\text{R}_2\text{CR}_3\text{R}_4 = \text{isopentadecene residue}$ ,  $\text{R}_5 = \text{R}_6 = \text{X} = \text{H}$ ,  $\text{A} = \text{ethylene}$ ,  $m = 1$ ,  $n = 10$ ,  $s = 0$ ), which showed surface tension 36.3 mN/m in 0.1% aq. soln.

IT 106-89-8DP, Epichlorohydrin, **ethers** with with vinyl-terminated polyoxyalkylenes, quaternized 25322-68-3DP, Polyethylene glycol, reaction products with unsatd. alc.-alkylene oxide adducts  
 RL: IMF (Industrial manufacture); NUU (Other use, unclassified); RCT (Reactant); PREP (Preparation); RACT (Reactant or reagent); USES (Uses) (manuf. of vinyl-terminated polyoxyalkylenes as reactive surfactants, emulsifiers, dispersants, and modifiers)

RN 106-89-8 CAPLUS  
 CN Oxirane, (chloromethyl)- (9CI) (CA INDEX NAME)



RN 25322-68-3 CAPLUS  
 CN Poly(oxy-1,2-ethanediyl), .alpha.-hydro-.omega.-hydroxy- (9CI) (CA INDEX NAME)



IC ICM C07C043-178  
 ICS B01F017-02; B01F017-14; B01F017-34; B01F017-42; C07C059-60; C07C059-90; C07C217-28; C07C305-10; C07F009-09; C08F002-18; C08F002-24

CC 46-4 (Surface Active Agents and **Detergents**)  
 Section cross-reference(s): 37

ST reactive surfactant vinyl terminated polyoxyalkylene; isopentadecene oxide allyl alc adduct ethoxylated; emulsion polymn emulsifier reactive surfactant; suspension polymn dispersant reactive surfactant; antistatic antifogging reactive surfactant vinyl polyoxyalkylene; water resistance

- heat stability reactive surfactant
- IT Polyoxyalkylenes, preparation  
RL: IMF (Industrial manufacture); PREP (Preparation)  
(acrylic, graft; manuf. of vinyl-terminated polyoxyalkylenes as reactive surfactants, emulsifiers, dispersants, and modifiers)
- IT Polyoxyalkylenes, preparation  
RL: IMF (Industrial manufacture); PREP (Preparation)  
(acrylic; manuf. of vinyl-terminated polyoxyalkylenes as reactive surfactants, emulsifiers, dispersants, and modifiers)
- IT Polymerization  
(emulsion; manuf. of vinyl-terminated polyoxyalkylenes as reactive surfactants, emulsifiers, dispersants, and modifiers)
- IT Polyoxyalkylenes, uses  
RL: IMF (Industrial manufacture); NUU (Other use, unclassified); RCT (Reactant); PREP (Preparation); RACT (Reactant or reagent); USES (Uses)  
(ethers; manuf. of vinyl-terminated polyoxyalkylenes as reactive surfactants, emulsifiers, dispersants, and modifiers)
- IT Antifogging agents
- Antistatic materials
- Dispersing agents
- Emulsifying agents
- Water-resistant materials  
(manuf. of vinyl-terminated polyoxyalkylenes as reactive surfactants, emulsifiers, dispersants, and modifiers)
- IT Surfactants  
(nonionic; manuf. of vinyl-terminated polyoxyalkylenes as reactive surfactants, emulsifiers, dispersants, and modifiers)
- IT Polyoxyalkylenes, uses  
RL: IMF (Industrial manufacture); NUU (Other use, unclassified); RCT (Reactant); PREP (Preparation); RACT (Reactant or reagent); USES (Uses)  
(reaction products with unsatd. alc.-alkylene oxide adducts; manuf. of vinyl-terminated polyoxyalkylenes as reactive surfactants, emulsifiers, dispersants, and modifiers)
- IT Polymerization  
(suspension; manuf. of vinyl-terminated polyoxyalkylenes as reactive surfactants, emulsifiers, dispersants, and modifiers)
- IT 75-01-4DP, Vinyl chloride, polymers with vinyl-terminated polyoxyalkylene  
79-10-7DP, Acrylic acid, polymers with acrylate, styrene, and vinyl-terminated polyoxyalkylene 100-42-5DP, Styrene, polymers with acrylic acid, acrylate, and vinyl-terminated polyoxyalkylene 100-42-5DP, Styrene, polymers with vinyl-terminated polyoxyalkylene 140-88-5DP, Ethyl acrylate, polymers with acrylic acid, styrene, and vinyl-terminated polyoxyalkylene 109584-39-6P, Ethylene oxide-styrene graft copolymer 170501-83-4P, Ethylene oxide-vinyl chloride graft copolymer 461406-12-2P 461406-14-4DP, quaternized 461406-16-6DP, quaternized 461406-18-8DP, quaternized 461676-51-7P, Acrylic acid-ethyl acrylate-ethylene oxide-styrene graft copolymer sulfate sodium salt 461676-54-0P, Acrylic acid-ethyl acrylate-ethylene oxide-styrene graft copolymer sulfate ammonium salt 461676-62-0P, Acrylic acid-ethyl acrylate-ethylene oxide-styrene graft copolymer phosphate sodium salt 461676-67-5P, Acrylic acid-ethyl acrylate-ethylene oxide-styrene graft copolymer carboxymethyl ether sodium salt 461676-73-3P, Acrylic acid-ethyl acrylate-ethylene oxide-styrene graft copolymer 3-sulfopropyl ether sodium salt 461676-78-8P, Acrylic acid-ethyl acrylate-ethylene oxide-propylene oxide-styrene graft copolymer sulfate ammonium salt 461676-82-4P, Ethylene oxide-vinyl chloride graft copolymer sulfate sodium salt 461676-87-9P, Ethylene oxide-vinyl chloride graft copolymer sulfate ammonium salt 461676-92-6P, Ethylene oxide-vinyl chloride graft copolymer phosphate sodium salt 461676-98-2P,

Ethylene oxide-vinyl chloride graft copolymer carboxymethyl **ether** sodium salt 461677-03-2P, Ethylene oxide-vinyl chloride graft copolymer 3-sulfopropyl **ether** sodium salt 461677-10-1P, Ethylene oxide-propylene oxide-vinyl chloride graft copolymer sulfate ammonium salt 461677-13-4P, Ethylene oxide-styrene graft copolymer sulfate sodium salt 461677-20-3P, Ethylene oxide-styrene graft copolymer phosphate sodium salt 461677-22-5P, Ethylene oxide-styrene graft copolymer carboxymethyl **ether** sodium salt 461677-24-7P, Ethylene oxide-styrene graft copolymer 3-sulfopropyl **ether** sodium salt 461677-26-9P, Ethylene oxide-propylene oxide-styrene graft copolymer sulfate ammonium salt 461677-64-5P

RL: IMF (Industrial manufacture); PREP (Preparation)

(manuf. of vinyl-terminated polyoxyalkylenes as reactive surfactants, emulsifiers, dispersants, and modifiers)

IT 79-10-7DP, Acrylic acid, esters with with vinyl-terminated polyoxyalkylenes 102-71-6DP, Triethanolamine, reaction products with epichlorohydrin adducts with vinyl-terminated polyoxyalkylene **106-89-8DP**, Epichlorohydrin, **ethers** with with vinyl-terminated polyoxyalkylenes, quaternized 107-18-6DP, Allyl alcohol, reaction products with alkylene oxides 110-16-7DP, Maleic acid, esters with with vinyl-terminated polyoxyalkylenes 513-42-8DP, Methallyl alcohol, reaction products with alkylene oxides 1120-71-4DP, Propane sultone, **ethers** with with vinyl-terminated polyoxyalkylenes 3926-62-3DP, Sodium chloroacetate, **ethers** with with vinyl-terminated polyoxyalkylenes 9003-11-6DP, Ethylene oxide-propylene oxide copolymer, reaction products with unsatd. alc.-alkylene oxide adducts **25322-68-3DP**, Polyethylene glycol, reaction products with unsatd. alc.-alkylene oxide adducts 69845-62-1DP, Undecenol, reaction products with alkylene oxides 85721-27-3DP, reaction products with unsatd. alc. and alkylene oxides 461674-16-8DP, reaction products with unsatd. alc. and alkylene oxides 461676-47-1DP, reaction products with unsatd. alc. and alkylene oxides

RL: IMF (Industrial manufacture); NUU (Other use, unclassified); RCT

(Reactant); PREP (Preparation); RACT (Reactant or reagent); USES (Uses)

(manuf. of vinyl-terminated polyoxyalkylenes as reactive surfactants, emulsifiers, dispersants, and modifiers)

IT 461674-16-8P

RL: IMF (Industrial manufacture); RCT (Reactant); PREP (Preparation); RACT (Reactant or reagent)

(manuf. of vinyl-terminated polyoxyalkylenes as reactive surfactants, emulsifiers, dispersants, and modifiers)

IT 107-18-6, Allyl alcohol, reactions 63566-50-7, Isopentadecene

RL: RCT (Reactant); RACT (Reactant or reagent)

(manuf. of vinyl-terminated polyoxyalkylenes as reactive surfactants, emulsifiers, dispersants, and modifiers)

L40 ANSWER 2 OF 42 CAPLUS COPYRIGHT 2003 ACS

ACCESSION NUMBER: 2001:531117 CAPLUS

DOCUMENT NUMBER: 135:108993

TITLE: Cleaning sheets capable of imparting antifogging property to glass

INVENTOR(S): Otaguro, Takahiro; Kashiwada, Toshinobu; Suzuki, Tokuko; Tanomura, Mari

PATENT ASSIGNEE(S): Lion Corp., Japan

SOURCE: Jpn. Kokai Tokkyo Koho, 11 pp.

CODEN: JKXXAF

DOCUMENT TYPE: Patent

LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 1



## PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2001200290	A2	20010724	JP 2000-45180	20000118
PRIORITY APPLN. INFO.:			JP 2000-45180	20000118

AB The sheets are impregnated with cleaning solns. contg. surfactants and polyether-modified silicones. Thus, a 50/50 polyester-rayon nonwoven fabric was impregnated with a soln. contg. 0.05% **polyoxyethylene** isostearyl ether and 1.0% graft polyether-siloxane to give a cleaning sheet.

IC ICM C11D003-37  
ICS A47L001-15; C09K003-18; C11D017-04

CC 46-6 (Surface Active Agents and **Detergents**)  
Section cross-reference(s): 40

ST cleaning sheet glass **polyoxyethylene** isostearyl ether; graft **polyoxyalkylene** polysiloxane cleaning sheet glass; antifogging property glass cleaning sheet; polyester rayon nonwoven fabric cleaning glass

IT **Polyoxyalkylenes**, uses  
RL: TEM (Technical or engineered material use); USES (Uses)  
(alkylsulfates, surfactants; cleaning sheets capable of imparting antifogging property to glass)

IT Polypropene fibers, uses  
RL: TEM (Technical or engineered material use); USES (Uses)  
(biconstituent with polyester fibers, nonwoven fabric; cleaning sheets capable of imparting antifogging property to glass)

IT Antifogging agents  
Detergents  
Nonwoven fabrics  
Surfactants  
(cleaning sheets capable of imparting antifogging property to glass)

IT Glass, miscellaneous  
RL: MSC (Miscellaneous)  
(cleaning sheets capable of imparting antifogging property to glass)

IT Acrylic fibers, uses  
RL: TEM (Technical or engineered material use); USES (Uses)  
(fabrics, nonwoven; cleaning sheets capable of imparting antifogging property to glass)

IT Rayon, uses  
RL: TEM (Technical or engineered material use); USES (Uses)  
(fabrics, polyester blend, nonwoven; cleaning sheets capable of imparting antifogging property to glass)

IT Polyester fibers, uses  
RL: TEM (Technical or engineered material use); USES (Uses)  
(fabrics, rayon blend, nonwoven; cleaning sheets capable of imparting antifogging property to glass)

IT Acrylic fibers, uses  
RL: TEM (Technical or engineered material use); USES (Uses)  
(nonwoven fabrics; cleaning sheets capable of imparting antifogging property to glass)

IT Rayon, uses  
RL: TEM (Technical or engineered material use); USES (Uses)  
(polyester blend, nonwoven fabrics; cleaning sheets capable of imparting antifogging property to glass)

IT Polysiloxanes, uses  
RL: TEM (Technical or engineered material use); USES (Uses)  
(**polyoxyalkylene**-, graft; cleaning sheets capable of imparting antifogging property to glass)

- IT **Polyoxyalkylenes**, uses  
 RL: TEM (Technical or engineered material use); USES (Uses)  
 (polysiloxane-, graft; cleaning sheets capable of imparting antifogging property to glass)
- IT Polyester fibers, uses  
 RL: TEM (Technical or engineered material use); USES (Uses)  
 (rayon blend, nonwoven fabrics; cleaning sheets capable of imparting antifogging property to glass)
- IT 156549-36-9D, trimethylsilyl-terminated  
 RL: TEM (Technical or engineered material use); USES (Uses)  
 (cleaning sheets capable of imparting antifogging property to glass)
- IT 25085-53-4, Isotactic polypropylene  
 RL: TEM (Technical or engineered material use); USES (Uses)  
 (fibers, biconstituent with polyester fibers; cleaning sheets capable of imparting antifogging property to glass)
- IT 629-25-4, Sodium laurate 683-10-3, Lauryldimethylaminoacetic acid betaine 9002-92-0, Polyethylene glycol lauryl **ether** 25322-68-3D, Polyethylene glycol, alkylsulfates 52292-17-8, Polyethylene glycol isostearyl **ether**  
 RL: TEM (Technical or engineered material use); USES (Uses)  
 (**surfactants**; cleaning sheets **capable** of imparting antifogging property to glass)

L40 ANSWER 3 OF 42 CAPLUS COPYRIGHT 2003 ACS

ACCESSION NUMBER: 2001:444540 CAPLUS

DOCUMENT NUMBER: 135:53499

TITLE: Far-UV-transparent photoresists, their monomers and preparation, photolithography thereby, and semiconductor devices therefrom

INVENTOR(S): Choi, Jae Hak; Gil, Myung Goon

PATENT ASSIGNEE(S): Hyundai Electronics Industries Co., Ltd., S. Korea

SOURCE: Jpn. Kokai Tokkyo Koho, 13 pp.

CODEN: JKXXAF

DOCUMENT TYPE: Patent

LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2001163926	A2	20010619	JP 2000-310887	20001011
US 6492088	B1	20021210	US 2000-686548	20001011

PRIORITY APPLN. INFO.: KR 1999-43843 A 19991011

OTHER SOURCE(S): MARPAT 135:53499

AB The photoresists, showing superior dry-etching resistance, comprise photocyclopolymer products of  $R1OCOC(:CH_2)CH_2(CH_2)nCH_2C(:CH_2)CO_2R_2$  and/or  $R1OCOCH(CO_2R_3)CH_2(CH_2)nCH_2CH(CO_2R_4)CO_2R_2$  ( $R_1$  = acid-labile protecting groups;  $R_2-4$  = H, acid-labile protecting group;  $n$  = 1-3 integer). Compns. of the photoresists with photoacid generators (preferably sulfides or onium salts) and org. solvents are also claimed. Photolithog. on the compns. by ArF, KrF, VUV, EUV, electron-beam, x-ray, or ion-beam exposure is also claimed.

IT **344913-98-0P**

RL: **IMF (Industrial manufacture)**; PEP (Physical, engineering or chemical process); PRP (Properties); TEM (Technical or engineered material use); **PREP (Preparation)**; PROC (Process); USES (Uses)

(chem.-amplified photoresists comprising alicyclic polymer skeletons for far-UV photolithog.)

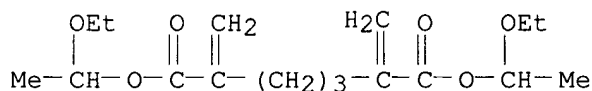
RN. 344913-98-0 CAPLUS

CN Heptanedioic acid, 2,6-bis(methylene)-, bis(1-ethoxyethyl) ester, homopolymer (9CI) (CA INDEX NAME)

CM 1

CRN 344913-97-9

CMF C17 H28 O6



IC ICM C08F036-20

ICS C07C069-34; C07C069-602; C08F004-04; C08F004-32; C08K005-00; C08K005-521; C08K005-59; C08L047-00; G03F007-039; H01L021-027

CC 74-5 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)

Section cross-reference(s): 76

ST far UV photoresist alicyclic skeleton polymer; etching resistant photoresist butylmethylene pimelate polymer; amplified chem radiation sensitive resist; semiconductor photolithog UV transparent photoresist alicyclic

IT Memory devices

(DRAM (dynamic random access); chem.-amplified photoresists comprising alicyclic polymer skeletons for far-UV photolithog.)

IT Photoresists

(chem. amplified; chem.-amplified photoresists comprising alicyclic polymer skeletons for far-UV photolithog.)

IT Semiconductor device fabrication

(chem.-amplified photoresists comprising alicyclic polymer skeletons for far-UV photolithog.)

IT Photolithography

(far-UV; chem.-amplified photoresists comprising alicyclic polymer skeletons for far-UV photolithog.)

IT Onium compounds

Sulfides, uses

RL: CAT (Catalyst use); USES (Uses)

(photoacid generators; chem.-amplified photoresists comprising alicyclic polymer skeletons for far-UV photolithog.)

IT Resists

(radiation-sensitive; chem.-amplified photoresists comprising alicyclic polymer skeletons for far-UV photolithog.)

IT 344913-96-8P **344913-98-0P** 344914-01-8P 344914-04-1P

344914-06-3P 344914-08-5P 344914-10-9P 344914-12-1P

RL: **IMF (Industrial manufacture)**; PEP (Physical, engineering or chemical process); PRP (Properties); TEM (Technical or engineered material use); **PREP (Preparation)**; PROC (Process); USES (Uses)

(chem.-amplified photoresists comprising alicyclic polymer skeletons for far-UV photolithog.)

IT 52754-92-4, Diphenyliodonium hexafluoroantimonate 57835-99-1, Triphenylsulfonium hexafluorophosphate 57840-38-7, Triphenylsulfonium hexafluoroantimonate 57900-42-2, Triphenylsulfonium hexafluoroarsenate 58109-40-3, Diphenyliodonium hexafluorophosphate 62613-15-4, Diphenyliodonium hexafluoroarsenate 66003-78-9, Triphenylsulfonium triflate 81416-37-7 116808-67-4 145612-66-4 195245-87-5 255056-42-9

RL: CAT (Catalyst use); USES (Uses)

(far-UV; chem.-amplified photoresists comprising alicyclic polymer skeletons for far-UV photolithog.)

IT 3779-30-4P, Tetraethyl 1,1,5,5-pentanetetracarboxylate 91907-06-1P  
344914-16-5P  
RL: PNU (Preparation, unclassified); RCT (Reactant); PREP (Preparation);  
RACT (Reactant or reagent)  
(in prepn. of monomers for chem.-amplified photoresists comprising alicyclic polymer skeletons)

IT 75-65-0, tert-Butanol, reactions 105-53-3, Diethyl malonate 109-64-8,  
Trimethylene bromide 109-92-2, Ethyl vinyl ether 110-87-2 557-31-3,  
Ethyl allyl ether  
RL: RCT (Reactant); RACT (Reactant or reagent)  
(in prepn. of monomers for chem.-amplified photoresists comprising alicyclic polymer skeletons)

IT 108-94-1, Cyclohexanone, uses 763-69-9, Ethyl 3-ethoxypropionate  
3852-09-3, Methyl 3-methoxypropionate 84540-57-8, Propylene glycol  
methyl ether acetate  
RL: TEM (Technical or engineered material use); USES (Uses)  
(solvents; chem.-amplified photoresists comprising alicyclic polymer skeletons for far-UV photolithog.)

L40 ANSWER 4 OF 42 CAPLUS COPYRIGHT 2003 ACS

ACCESSION NUMBER: 2001:435221 CAPLUS

DOCUMENT NUMBER: 135:34621

TITLE: Compositions including **ether-capped**  
poly(**oxyalkylated**) alcohol  
**surfactants**

INVENTOR(S): Jordan, Glenn Thomas Iv; Scheper, William Michael;  
Sivik, Mark Robert; Kluesener, Bernard William

PATENT ASSIGNEE(S): The Procter + Gamble Company, USA

SOURCE: PCT Int. Appl., 122 pp.

CODEN: PIXXD2

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 5

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2001042411	A1	20010614	WO 2000-US33411	20001208
W:	AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM			
RW:	GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG			
EP 1235892	A1	20020904	EP 2000-984111	20001208
R:	AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR			
PRIORITY APPLN. INFO.:			US 1999-169585P	P 19991208
			US 2000-178803P	P 20000128
			US 2000-663576	A 20000912
			WO 2000-US33411	W 20001208

OTHER SOURCE(S): MARPAT 135:34621

AB A detergent compn. comprises: (a) 0.01-50% of the compn. of

KOROMA EIC1700

**surfactant**, wherein the **surfactant** comprises an **ether-capped poly(oxyalkylated) alc.**  
**surfactant** RO(R1O)xCH(CH3)OR2 wherein, R is selected from the group consisting of linear or branched, satd. or unsatd., substituted or unsubstituted, aliph. or arom. hydrocarbon radicals having from 1 to 30 carbon atoms; R1 may be the same or different, and is independently selected from the group consisting of branched or linear C2 to C7 alkylene in any given mol.; x is a no. from 1 to 30; and R2 is selected from the group consisting of: (i) a 4 to 8 membered substituted, or unsubstituted heterocyclic ring contg. from 1 to 3 hetero atoms; and (ii) linear or branched, satd. or unsatd., substituted or unsubstituted, cyclic or acyclic, aliph. or arom. hydrocarbon radicals having from 1 to 30 carbon atoms; provided that when R2 is (ii) then either at least one of R' is other than C2 to C3 alkylene or R2 has from 6 to 30 carbon atoms; and (b) 0.1-99% of the compn. of an adjunct ingredient. The compns. have superior grease cleaning abilities and improved spotting/filming benefits are provided.

- IC ICM C11D001-72
- ICS C11D001-825; C11D003-395; C11D001-75
- CC 46-3 (Surface Active Agents and **Detergents**)
- ST **ether capped** alkoxyated alc **surfactant**
- IT Alcohols, uses  
 RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)  
 (C11-15-secondary, ethoxylated, **ether-capped**;  
 compns. including **ether-capped** poly(  
**oxyalkylated**) alc. **surfactants**)
- IT Alcohols, uses  
 RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)  
 (C9-11, ethoxylated, Neodol 91-8, **ether-capped**;  
 compns. including **ether-capped** poly(  
**oxyalkylated**) alc. **surfactants**)
- IT Alcohols, uses  
 RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)  
 (alkoxylated, **ether-capped**; compns. including  
**ether-capped** poly(**oxyalkylated**) alc.  
**surfactants**)
- IT **Polyoxyalkylenes**, uses  
 RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)  
 (alkyl group-terminated, **ether-capped**; compns.  
 including **ether-capped** poly(**oxyalkylated**)  
 alc. **surfactants**)
- IT Bleaching agents  
 Detergents  
 (compns. including **ether-capped** poly(  
**oxyalkylated**) alc. **surfactants**)
- IT **Surfactants**  
 (nonionic; compns. including **ether-capped** poly(  
**oxyalkylated**) alc. **surfactants**)
- IT Detergents  
 (rinse aids; compns. including **ether-capped** poly(  
**oxyalkylated**) alc. **surfactants**)
- IT 75-56-9DP, **Propylene oxide**, reaction products with  
 alkoxyated alcs. 103-44-6DP, 2-Ethylhexyl vinyl ether, reaction  
 products with alkoxyated alcs. 106-88-7DP, 1,2-Epoxybutane, reaction  
 products with alkoxyated alcs. 109-92-2DP, Ethyl vinyl ether, reaction

products with alkoxyated alcs. 930-02-9DP, Octadecyl vinyl ether, reaction products with alkoxyated alcs. 2182-55-0DP, Cyclohexyl vinyl ether, reaction products with alkoxyated alcs. 29281-39-8DP, tert-Pentyl vinyl ether, reaction products with alkoxyated alcs.

34398-01-1DP, Neodol 1-7, **ether-capped**

RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)

(compns. including **ether-capped** poly(**oxyalkylated**) alc. **surfactants**)

REFERENCE COUNT: 6 THERE ARE 6 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L40 ANSWER 5 OF 42 CAPLUS COPYRIGHT 2003 ACS

ACCESSION NUMBER: 2001:435220 CAPLUS

DOCUMENT NUMBER: 135:34620

TITLE: Compositions including **ether-capped** poly(**oxyalkylated**) alcohol **surfactants**

INVENTOR(S): Jordan, Glenn Thomas, IV; Scheper, William Michael; Sivik, Mark Robert; Haeggberg, Donna Jean; Kluesener, Bernard William

PATENT ASSIGNEE(S): Procter + Gamble Company, USA

SOURCE: PCT Int. Appl., 110 pp.

CODEN: PIXXD2

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2001042410	A1	20010614	WO 2000-US33353	20001208
W:	AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM			
RW:	GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG			
EP 1235891	A1	20020904	EP 2000-984084	20001208
R:	AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR			
PRIORITY APPLN. INFO.:			US 1999-169708P	P 19991208
			US 2000-660363	A 20000912
			WO 2000-US33353	W 20001208

OTHER SOURCE(S): MARPAT 135:34620

AB Compns. including **ether-capped** poly(**oxyalkylated**) alc. **surfactants** having superior grease cleaning abilities and improved spotting/filming benefits are provided. The alc. surfactants have the formula RO(R1O)xR2 wherein, R is selected from the group consisting of linear or branched, satd. or unsatd., substituted or unsubstituted, aliph. or arom. hydrocarbon radicals having from about 1 to about 30 carbon atoms; R1 may be the same or different, and is independently selected from the group consisting of branched or linear C2 to C7 alkylene in any given mol.; R2 is selected from the group consisting of: (i) a 4 to 8 membered substituted, or unsubstituted

heterocyclic ring contg. from 1 to 3 hetero atoms; (ii) a 7 to 13 membered substituted, or unsubstituted polycyclic ring; (iii) a hydrocarbon of the formula  $-(CH_2)_y-X$  wherein, y is an integer from 1 to 7, X is a 4 to 8 membered substituted, or unsubstituted, satd. or unsatd. cyclic or arom. hydrocarbon radical; and (iv) a hydrocarbon radical of the formula  $-C(CH_3)_2R_3$  wherein  $R_3$  is selected from the group consisting of linear or branched, satd. or unsatd., substituted or unsubstituted, aliph. or arom. hydrocarbon radicals having from about 1 to about 30 carbon atoms, provided that when  $R_3$  is Me, R is branched; wherein x is a no. from 1 to about 30.

IC ICM C11D001-72

CC 46-3 (Surface Active Agents and **Detergents**)

ST alkoxylated alc **ether capped** nonionic  
**surfactant**

IT Alcohols, uses

RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)  
(C9-11, ethoxylated, **ether-capped**; compns.  
including **ether-capped** poly(oxyalkylated)  
alc. **surfactants**)

IT Alcohols, uses

RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)  
(alkoxylated, **ether-capped**; compns. including  
**ether-capped** poly(oxyalkylated) alc.  
**surfactants**)

IT **Polyoxyalkylenes**, uses

RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)  
(alkyl group-terminated, **ether-capped**; compns.  
including **ether-capped** poly(oxyalkylated)  
alc. **surfactants**)

IT Detergents

(compns. including **ether-capped** poly(  
**oxyalkylated**) alc. **surfactants**)

IT Detergents

(dishwashing; compns. including **ether-capped** poly(  
**oxyalkylated**) alc. **surfactants**)

IT **Surfactants**

(nonionic; compns. including **ether-capped** poly(  
**oxyalkylated**) alc. **surfactants**)

IT 75-56-9DP, **Propylene oxide**, reaction products with


alkoxylated alcs. 75-85-4DP, tert-Amyl alcohol, reaction products with  
alkoxylated alcs. 106-88-7DP, 1,2-Epoxybutane, reaction products with  
alkoxylated alcs. 110-87-2DP, 3,4-Dihydro-2H-pyran, reaction products  
with alkoxylated alcs. 536-74-3DP, Phenylacetylene, reaction products  
with alkoxylated alcs. 563-46-2DP, 2-methyl-1-butene, reaction products  
with alkoxylated alcs. 1191-99-7DP, 2,3-Dihydrofuran, reaction products  
with alkoxylated alcs. 2270-61-3DP, 3,4-Dihydro-4-methyl-2H-pyran,  
reaction products with alkoxylated alcs. 34398-01-1DP, Neodol 1-7,  
**ether-capped**

RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)  
(compns. including **ether-capped** poly(  
**oxyalkylated**) alc. **surfactants**)

REFERENCE COUNT:

8

THERE ARE 8 CITED REFERENCES AVAILABLE FOR THIS  
RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L40 ANSWER 6  42 CAPLUS COPYRIGHT 2003 ACS

KOROMA EIC1700

ACCESSION NUMBER: 2001:435218 CAPLUS  
 DOCUMENT NUMBER: 135:34643  
 TITLE: **Ether-capped poly(oxyalkylated) alcohol surfactants**  
 INVENTOR(S): Sivik, Mark Robert; Jordan, Glenn Thomas, IV;  
 Kluesener, Bernard William; Scheper, William Michael;  
 Haeggberg, Donna Jean; Mckenzie, Kristen Lynne  
 PATENT ASSIGNEE(S): Procter + Gamble Company, USA  
 SOURCE: PCT Int. Appl., 108 pp.  
 CODEN: PIXXD2  
 DOCUMENT TYPE: Patent  
 LANGUAGE: English  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2001042408	A2	20010614	WO 2000-US33352	20001208
WO 2001042408	A3	20020214		
W: AE, AG, AL, AM, AT, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CR, CU, CZ, CZ, DE, DE, DK, DK, DM, DZ, EE, EE, ES, FI, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG EP 1235820 A2 20020904 EP 2000-984083 20001208 R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR PRIORITY APPLN. INFO.: US 1999-169569P P 19991208 US 1999-169706P P 19991208 WO 2000-US33352 W 20001208 OTHER SOURCE(S): MARPAT 135:34643 AB <b>Ether-capped poly(oxyalkylated) alc.</b> <b>surfactants</b> having superior grease cleaning abilities and improved spotting/filming benefits are provided. The alc. surfactants have the formula: RO(R1O)xR2, wherein, R is selected from the group consisting of linear or branched, satd. or unsatd., substituted or unsubstituted, aliph. or arom. hydrocarbon radicals having from about 1 to about 30 carbon atoms; R1 may be the same or different, and is independently selected from the group consisting of branched or linear C2 to C7 alkylene in any given mol.; R2 is selected from the group consisting of: (i) a 4 to 8 membered substituted, or unsubstituted heterocyclic ring contg. from 1 to 3 hetero atoms; (ii) a 7 to 13 membered substituted, or unsubstituted polycyclic ring; (iii) a hydrocarbon of the formula: -(CH2)y-X, wherein, y is an integer from 1 to 7, X is a 4 to 8 membered substituted, or unsubstituted, satd. or unsatd. cyclic or arom. hydrocarbon radical; and (iv) a hydrocarbon radical of the formula: -C(CH3)2R3, wherein R3 is selected from the group consisting of linear or branched, satd. or unsatd., substituted or unsubstituted, aliph. or arom. hydrocarbon radicals having from about 1 to about 30 carbon atoms, provided than when R3 is Me, R is branched; wherein x is a no. from 1 to about 30. IC ICM C11D001-00 CC 46-6 (Surface Active Agents and <b>Detergents</b> ) ST <b>ether capped</b> alkoxyated alc nonionic <b>surfactant</b>				



IT Alcohols, uses  
 RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)  
 (C9-11, ethoxylated, reaction products with **ether capping** groups; **ether-capped** poly(**oxyalkylated**) alc. **surfactants**)

IT Alcohols, uses  
 RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)  
 (alkoxylated; **ether-capped** poly(**oxyalkylated**) alc. **surfactants**)

IT **Polyoxyalkylenes**, uses  
 RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)  
 (alkyl group-terminated; **ether-capped** poly(**oxyalkylated**) alc. **surfactants**)

IT Detergents  
 (**ether-capped** poly(**oxyalkylated**) alc. **surfactants**)

IT **Surfactants**  
 (nonionic; **ether-capped** poly(**oxyalkylated**) alc. **surfactants**)

IT 75-56-9DP, **Propylene oxide**, reaction products with  
 alkoxyated alcs. 75-85-4DP, tert-Amyl alcohol, reaction products with  
 alkoxyated alcs. 106-88-7DP, 1,2-Epoxybutane, reaction products with  
 alkoxyated alcs. 110-87-2DP, 3,4-Dihydro-2H-pyran, reaction products  
 with alkoxyated alcs. 536-74-3DP, Phenylacetylene, reaction products  
 with alkoxyated alcs. 563-46-2DP, 2-Methyl-1-butene, reaction products  
 with alkoxyated alcs. 1191-99-7DP, 2,3-Dihydrofuran, reaction products  
 with alkoxyated alcs. 2270-61-3DP, 3,4-Dihydro-4-methyl-2H-pyran,  
 reaction products with alkoxyated alcs. 34398-01-1DP, Neodol 1-7,  
 reaction products with **ether capping** groups  
 RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)  
 (**ether-capped** poly(**oxyalkylated**) alc. **surfactants**)

L40 ANSWER 7 OF 42 CAPLUS COPYRIGHT 2003 ACS

ACCESSION NUMBER: 2001:434940 CAPLUS

DOCUMENT NUMBER: 135:47979

TITLE: **Ether-capped** poly(**oxyalkylated**) alcohol **surfactants**

INVENTOR(S): Sivik, Mark Robert; Kluesener, Bernard William;  
 Jordan, Glenn Thomas Iv; Scheper, William Michael

PATENT ASSIGNEE(S): The Procter + Gamble Company, USA

SOURCE: PCT Int. Appl., 110 pp.

CODEN: PIXXD2

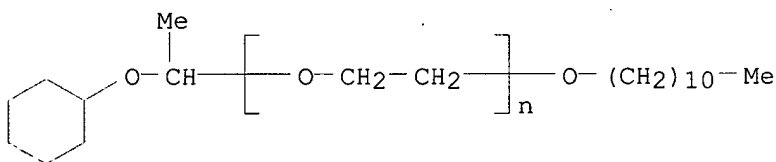
DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 5

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2001041912	A2	20010614	WO 2000-US33580	20001208
WO 2001041912	A3	20020221		
W:	AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR,			



KOROMA EIC1700

IT Alcohols, reactions  
RL: RCT (Reactant); RACT (Reactant or reagent)  
(C9-11, ethoxylated, Neodol 91-8, reaction products with cyclohexyl vinyl **ether**; **ether-capped** poly(**oxyalkylated**) alc. **surfactants**)

IT Alcohols, uses  
RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)  
(alkoxylated; **ether-capped** poly(**oxyalkylated**) alc. **surfactants**)

IT Polyoxyalkylenes, uses  
RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)  
(alkyl group-terminated; **ether-capped** poly(**oxyalkylated**) alc. **surfactants**)

IT **Surfactants**  
(**ether-capped** poly(**oxyalkylated**) alc. **surfactants**)

IT 2182-55-ODP, Cyclohexyl vinyl ether, reaction products with Neodol 91-8  
**344421-93-8P** 344551-20-8P  
RL: **IMF (Industrial manufacture)**; TEM (Technical or engineered material use); **PREP (Preparation)**; USES (Uses)  
(**ether-capped** poly(**oxyalkylated**) alc. **surfactants**)

IT 103-44-6, 2-Ethylhexyl vinyl **ether** 106-88-7, 1,2-Epoxybutane  
34398-01-1, Neodol 1-7  
RL: RCT (Reactant); RACT (Reactant or reagent)  
(**ether-capped** poly(**oxyalkylated**) alc. **surfactants**)

L40 ANSWER 8 ~~OF~~ 42 CAPLUS COPYRIGHT 2003 ACS

ACCESSION NUMBER: 2001:434939 CAPLUS

DOCUMENT NUMBER: 135:47955

TITLE: Process for preparing **ether-capped**  
poly(**oxyalkylated**) alcohol  
**surfactants**

INVENTOR(S): Kluesener, Bernard William; Jordan, Glenn Thomas, IV;  
Huber, Paul William, Jr.; Neyraval, Philippe; Priou,  
Christian; Sivik, Mark Robert

PATENT ASSIGNEE(S): The Procter + Gamble Company, USA; Rhodia, Inc.

SOURCE: PCT Int. Appl., 15 pp.

CODEN: PIXXD2

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 5

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
-----	----	-----	-----	-----
WO 2001041911	A2	20010614	WO 2000-US33421	20001208
WO 2001041911	A3	20011220		
W:	AE, AG, AL, AM, AT, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CR, CU, CZ, CZ, DE, DE, DK, DK, DM, DZ, EE, EE, ES, FI, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM			
RW:	GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY,			

KOROMA EIC1700

DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF,  
 BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG  
 US 2001039367 A1 20011108 US 2000-732840 20001208  
 US 6506945 B2 20030114  
 EP 1235779 A2 20020904 EP 2000-984117 20001208  
 R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT,  
 IE, SI, LT, LV, FI, RO, MK, CY, AL, TR

PRIORITY APPLN. INFO.:  
 US 1999-169561P P 19991208  
 US 1999-169632P P 19991208  
 US 2000-178568P P 20000128  
 US 2000-178877P P 20000128  
 US 2000-659895 A 20000912  
 US 2000-660162 A 20000912  
 WO 2000-US33421 W 20001208

OTHER SOURCE(S): MARPAT 135:47955

AB A process for prepg. an **ether-capped poly(oxyalkylated) alc. surfactant** is provided. The alc. has the formula  $RO(R1O)_xCH(CH3)OR2$  wherein R is selected from the group consisting of linear or branched, satd. or unsatd., substituted or unsubstituted, aliph. or arom. hydrocarbon radicals having from about 1 to about 30 carbon atoms; R1 may be the same or different, and is independently selected from the group consisting of branched or linear C2 to C7 alkylene in any given mol.; x is a no. from 1 to about 30; and R2 is a six membered substituted or unsubstituted, satd. or unsatd., cyclic or arom. hydrocarbon radical. Thus, 20.00 g Neodol 91-8 was reacted with 5.04 g cyclohexyl vinyl ether at room temp. for 16 min in the presence of 0.112 g p-toluenesulfonic acid, triethanolamine was added to adjust pH.  $\text{gtoreq.7}$  giving C9/11H19/23EO8-cyclohexyl acetal.

IC ICM B01F017-00

CC 46-3 (Surface Active Agents and Detergents)

ST **ether capped polyoxyalkylated alc surfactant** prepn

IT Alkali metal compounds

RL: NUU (Other use, unclassified); USES (Uses)  
 ((bi)carbonates, quenching agents; prepn. of **ether-capped poly(oxyalkylated) alc. surfactants**)

IT Alcohols, uses

RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)  
 (C9-11, ethoxylated, Neodol, reaction products with cyclohexyl vinyl **ether**; prepn. of **ether-capped poly(oxyalkylated) alc. surfactants**)

IT Bicarbonates

Carbonates, uses

Metal alkoxides

RL: NUU (Other use, unclassified); USES (Uses)  
 (alkali metal, quenching agents; prepn. of **ether-capped poly(oxyalkylated) alc. surfactants**)

IT Alkali metal compounds

RL: NUU (Other use, unclassified); USES (Uses)  
 (alkoxides, quenching agents; prepn. of **ether-capped poly(oxyalkylated) alc. surfactants**)

IT Alcohols, uses

RL: NUU (Other use, unclassified); USES (Uses)  
 (amino, quenching agents; prepn. of **ether-capped poly(oxyalkylated) alc. surfactants**)

IT Amines, uses

RL: NUU (Other use, unclassified); USES (Uses)  
 (arom., quenching agents; prepn. of **ether-capped**

- poly(**oxyalkylated**) alc. **surfactants**)
- IT **Polyoxyalkylenes**, uses  
 RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)  
 (ethers; prepn. of **ether-capped** poly(**oxyalkylated**) alc. **surfactants**)
- IT **Surfactants**  
 (nonionic; prepn. of **ether-capped** poly(**oxyalkylated**) alc. **surfactants**)
- IT Alkali metal hydroxides  
 Amines, uses  
 RL: NUU (Other use, unclassified); USES (Uses)  
 (quenching agents; prepn. of **ether-capped** poly(**oxyalkylated**) alc. **surfactants**)
- IT 75-75-2, Methanesulfonic acid 104-15-4, p-Toluenesulfonic acid, uses  
 RL: CAT (Catalyst use); USES (Uses)  
 (catalyst; prepn. of **ether-capped** poly(**oxyalkylated**) alc. **surfactants**)
- IT 2182-55-0DP, Cyclohexyl vinyl ether, reaction products with ethoxylated C9-11 alcs.  
 RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)  
 (prepn. of **ether-capped** poly(**oxyalkylated**) alc. **surfactants**)
- IT 102-71-6, Triethanolamine, uses 121-44-8, Triethylamine, uses 124-41-4  
 141-52-6, Sodium ethoxylate 144-55-8, Sodium bicarbonate, uses  
 497-19-8, Sodium carbonate, uses 584-08-7, Potassium carbonate  
 865-47-4  
 RL: NUU (Other use, unclassified); USES (Uses)  
 (quenching agent; prepn. of **ether-capped** poly(**oxyalkylated**) alc. **surfactants**)

L40 ANSWER 9 OF 42 CAPLUS COPYRIGHT 2003 ACS

ACCESSION NUMBER: 2001:434938 CAPLUS

DOCUMENT NUMBER: 135:47954

TITLE: Process for preparing **ether-capped**  
 poly(**oxyalkylated**) alcohol  
**surfactants**INVENTOR(S): Sivik, Mark Robert; Jordan, Glenn Thomas Iv;  
 Kluesener, Bernard William

PATENT ASSIGNEE(S): The Procter + Gamble Company, USA

SOURCE: PCT Int. Appl., 47 pp.  
 CODEN: PIXXD2

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 5

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2001041910	A2	20010614	WO 2000-US33350	20001208
WO 2001041910	A3	20020214		
W: AE, AG, AL, AM, AT, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH,				
CN, CR, CU, CZ, CZ, DE, DE, DK, DK, DM, DZ, EE, EE, ES, FI, FI,				
GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR,				
KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ,				
NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SK, SL, TJ, TM, TR,				
TT, TZ, UA, UG, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU,				
TJ, TM				

RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY,  
 DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF,  
 BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG  
 EP 1235778 A2 20020904 EP 2000-984081 20001208

R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT,  
 IE, SI, LT, LV, FI, RO, MK, CY, AL, TR

PRIORITY APPLN. INFO.:

US 1999-169561P P 19991208

US 2000-178568P P 20000128

US 2000-660162 A 20000912

WO 2000-US33350 W 20001208

OTHER SOURCE(S):

MARPAT 135:47954

AB A process for prep. an **ether-capped** poly(**oxyalkylated**) alc. **surfactant** is provided. The alc. has

the formula  $RO(R1O)_xCH(CH3)OR2$  wherein, R is selected from the group consisting of linear or branched, satd. or unsatd., substituted or unsubstituted, aliph. or arom. hydrocarbon radicals having from about 1 to about 30 carbon atoms; R1 may be the same or different, and is independently selected from the group consisting of branched or linear C2 to C7 alkylene in any given mol.; x is a no. from 1 to about 30; and R2 is selected from the group consisting of: (i) a 4 to 8 membered substituted, or unsubstituted heterocyclic ring contg. from 1 to 3 hetero atoms; and (ii) linear or branched, satd. or unsatd., substituted or unsubstituted, cyclic or acyclic, aliph. or arom. hydrocarbon radicals having from about 1 to about 30 carbon atoms; provided that when R2 is (ii) then either at least one of R1 is other than C2 to C3 alkylene or R2 has from 6 to 30 carbons atoms. Thus, 20.00 g Neodol 1-7 was heated at 140.degree. with 6.00 g 1,2-epoxybutane and 0.05 g sodium metal, cooled, and 19.49 g 2-ethylhexyl vinyl ether and 0.42 g pyridinium p-toluenesulfonate were added to give C11H23EO7B02-2-ethylhexyl acetal.

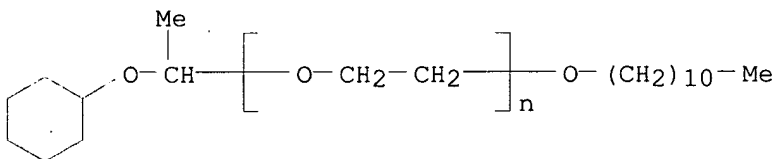
IT 344421-93-8P 344459-45-6P

RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)

(prepn. of **ether-capped** poly(**oxyalkylated**) alc. **surfactants**)

RN 344421-93-8 CAPLUS

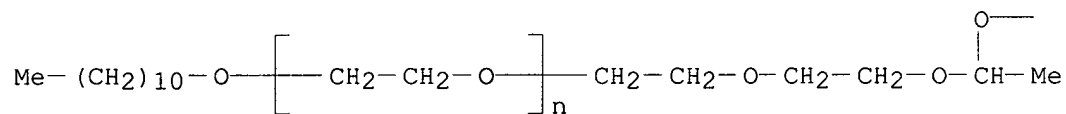
CN Poly(oxy-1,2-ethanediyl), .alpha.-[1-(cyclohexyloxy)ethyl]-.omega.-(undecyloxy)- (9CI) (CA INDEX NAME)



RN 344459-45-6 CAPLUS

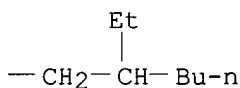
CN Poly(oxy-1,2-ethanediyl), .alpha.-[ethyl-2-[ethyl-2-[1-[(2-ethylhexyl)oxy]ethoxy]ethoxy]ethyl]-.omega.-(undecyloxy)- (9CI) (CA INDEX NAME)

PAGE 1-A



2 ( D1-Et )

PAGE 1-B



IC ICM B01F017-00  
 CC 46-3 (Surface Active Agents and **Detergents**)  
 ST **ether capped polyoxyalkylated alc**  
**surfactant** prepn  
 IT Alcohols, uses  
 RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)  
 (C11-15-secondary, ethoxylated, Tergitol 15S12, Tergitol 15S9, Tergitol 15S15, **ether-capped**; prepn. of **ether-capped poly(oxyalkylated) alc. surfactants**)  
 IT Alcohols, uses  
 RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)  
 (C12-15, ethoxylated, Neodol 25-9, **ether-capped**; prepn. of **ether-capped poly(oxyalkylated) alc. surfactants**)  
 IT Alcohols, uses  
 RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)  
 (C8-10, ethoxylated, **ether-capped**; prepn. of **ether-capped poly(oxyalkylated) alc. surfactants**)  
 IT Alcohols, uses  
 RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)  
 (C9-11, ethoxylated, Neodol 91-8, **ether-capped**; prepn. of **ether-capped poly(oxyalkylated) alc. surfactants**)  
 IT Zeolite HY  
 RL: CAT (Catalyst use); USES (Uses)  
 (catalysts; prepn. of **ether-capped poly(oxyalkylated) alc. surfactants**)  
 IT Detergents  
 (dishwashing; prepn. of **ether-capped poly(oxyalkylated) alc. surfactants** for)  
 IT **Polyoxyalkylenes**, uses  
 RL: IMF (Industrial manufacture); TEM (Technical or engineered material

use); PREP (Preparation); USES (Uses)  
 (ethers; prepn. of ether-capped poly(  
 oxyalkylated) alc. surfactants)

IT Detergents  
 (laundry; prepn. of ether-capped poly(  
 oxyalkylated) alc. surfactants for)

IT Surfactants  
 (nonionic; prepn. of ether-capped poly(  
 oxyalkylated) alc. surfactants)

IT Detergents  
 Shampoos  
 (prepn. of ether-capped poly(oxyalkylated  
 ) alc. surfactants for)

IT 75-75-2, Methanesulfonic acid 104-15-4, p-Toluenesulfonic acid, uses  
 109-63-7, Boron trifluoride-ethyl ether 546-68-9, Titanium  
 tetraisopropoxide 7446-70-0, Aluminum trichloride, uses 7646-78-8, Tin  
 tetrachloride, uses 7646-85-7, Zinc dichloride, uses 9003-70-7D,  
 Divinylbenzene-styrene copolymer, sulfonated 9017-40-7, Reillex 425  
 9037-24-5, Amberlyst 15 10049-06-6, Titanium dichloride 24057-28-1,  
 Pyridinium p-toluenesulfonate 29323-86-2 344427-61-8, Dowex 50X8-50  
 RL: CAT (Catalyst use); USES (Uses)  
 (catalyst; prepn. of ether-capped poly(  
 oxyalkylated) alc. surfactants)

IT 75-56-9DP, Propylene oxide, reaction products with  
 poly(oxyalkylated) alcs. and vinyl ethers  
 103-44-6DP, 2-Ethylhexyl vinyl ether, reaction products with poly(  
 oxyalkylated) alcs. 935-04-6DP, Benzyl vinyl ether, reaction  
 products with poly(oxyalkylated) alcs. 2182-55-0DP, Cyclohexyl  
 vinyl ether, reaction products with poly(oxyalkylated) alcs.  
 344421-93-8P 344459-45-6P  
 RL: IMF (Industrial manufacture); TEM (Technical or engineered  
 material use); PREP (Preparation); USES (Uses)  
 (prepn. of ether-capped poly(oxyalkylated  
 ) alc. surfactants)

IT 103-44-6, 2-Ethylhexyl vinyl ether 106-88-7, 1,2-Epoxybutane  
 34398-01-1, Neodol 1-7  
 RL: RCT (Reactant); RACT (Reactant or reagent)  
 (prepn. of ether-capped poly(oxyalkylated  
 ) alc. surfactants)

L40 ANSWER 10 OF 42 CAPLUS COPYRIGHT 2003 ACS  
 ACCESSION NUMBER: 2001:434937 CAPLUS  
 DOCUMENT NUMBER: 135:47978  
 TITLE: Compositions including ether-capped poly(oxyalkylated)  
 alcohol wetting agents  
 INVENTOR(S): Jordan, Glenn Thomas Iv; Scheper, William Michael;  
 Sivik, Mark Robert; Kluesener, Bernard William;  
 Mckenzie, Kristen Lynn  
 PATENT ASSIGNEE(S): The Procter + Gamble Company, USA  
 SOURCE: PCT Int. Appl., 74 pp.  
 CODEN: PIXXD2  
 DOCUMENT TYPE: Patent  
 LANGUAGE: English  
 FAMILY ACC. NUM. COUNT: 5  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2001041909	A1	20010614	WO 2000-US33257	20001208



W: AE, AG, AL, AM, AT, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CR, CU, CZ, CZ, DE, DE, DK, DK, DM, DZ, EE, EE, ES, FI, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM

RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY,  
DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF,  
BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG

EP 1235639                  A1        20020904                  EP 2000-982519        20001208

R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT,  
IE, SI, LT, LV, FI, RO, MK, CY, AL, TR

PRIORITY APPLN. INFO.:

US 1999-169585P P 19991208

US 1999-169632P P 19991208

US 2000-178803P P 20000128

US 2000-178877P P 20000128

US 2000-232298P P 20000912

US 2000-659895 A 20000912

US 2000-663576 A 20000912

WO 2000-US33257 W 20001208

OTHER SOURCE(S): MARPAT 135:47978

AB    Compsns. include ether-capped poly(oxyalkylated) alc. wetting agents. The wetting agents are low-foaming and have good biodegradability, and can be used in a variety of applications, for example in polymer, anti-foaming, biocidal, coating, fertilizer, pharmaceutical, and drilling fluid compsns. An ether-capped alkoxyated alc. was prepd. from Neodol 1-7, 1,2-epoxybutane, and 2-ethylhexyl vinyl ether.

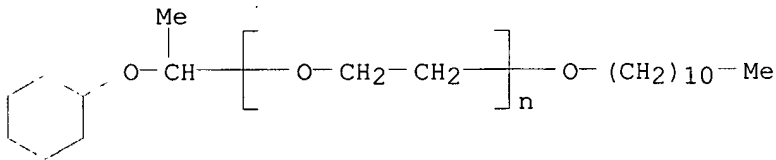
IT 344421-93-8P 344449-94-1P

RL: **IMF** (Industrial manufacture); TEM (Technical or engineered material use); **PREP** (Preparation); **USES** (Uses)

(compns. including ether-capped poly(oxyalkylated) alc. wetting agents)

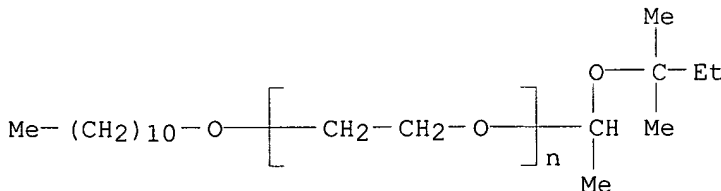
RN 344421-93-8 CAPLUS

CN Poly(oxy-1,2-ethanediyl), .alpha.-[1-(cyclohexyloxy)ethyl]-.omega.-  
(undecyloxy)- (9CI) (CA INDEX NAME)



RN 344449-94-1 CAPLUS

CN Poly(oxy-1,2-ethanediyl), .alpha.-[1-(1,1-dimethylpropoxy)ethyl]-.omega.-  
(undecyloxy)- (9CI) (CA INDEX NAME)



IC ICM B01F017-00  
ICS C11D001-72

CC 46-6 (Surface Active Agents and **Detergents**)  
Section cross-reference(s): 63

ST ether capped alkoxyated alc wetting agent

IT Contact lenses  
(Cleaners; compns. including ether-capped poly(oxyalkylated) alc. wetting agents)

IT Alcohols, uses  
RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)  
(C11-15-secondary, ethoxylated, Tergitol-15-S, reaction products with 2-ethylhexyl vinyl ether; compns. including ether-capped poly(oxyalkylated) alc. wetting agents)

IT Alcohols, uses  
RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)  
(C12-15, ethoxylated, Neodol 25-9, reaction products with cyclohexyl vinyl ether; compns. including ether-capped poly(oxyalkylated) alc. wetting agents)

IT Alcohols, uses  
RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)  
(C9-11, ethoxylated, Neodol 91-8, reaction products with cyclohexyl vinyl ether; compns. including ether-capped poly(oxyalkylated) alc. wetting agents)

IT Alcohols, uses  
RL: TEM (Technical or engineered material use); USES (Uses)  
(alkoxyated; compns. including ether-capped poly(oxyalkylated) alc. wetting agents)

IT Polyoxyalkylenes, uses  
RL: TEM (Technical or engineered material use); USES (Uses)  
(alkyl group-terminated; compns. including ether-capped poly(oxyalkylated) alc. wetting agents)

IT Antifoaming agents  
Cement (construction material)  
Coating materials  
Dentifrices  
Drilling fluids  
Drugs  
Wetting agents  
(compns. including ether-capped poly(oxyalkylated) alc. wetting agents)

IT Fertilizers  
RL: MSC (Miscellaneous)  
(compns. including ether-capped poly(oxyalkylated) alc. wetting agents)

IT 75-56-9DP, Propylene oxide, reaction products with Neodol 91-8 and tert-amyl vinyl ether 103-44-6DP, 2-Ethylhexyl vinyl ether, reaction products with Tergitol-15-S 930-02-9DP, Octadecyl vinyl ether, reaction products with Neodol 91-8 2182-55-0DP, Cyclohexyl vinyl ether, reaction products with Neodol 91-8 **344421-93-8P 344449-94-1P 344551-20-8P**  
RL: **IMF (Industrial manufacture)**; TEM (Technical or engineered material use); **PREP (Preparation)**; USES (Uses)  
(compns. including ether-capped poly(oxyalkylated) alc. wetting agents)

IT 103-44-6, 2-Ethylhexyl vinyl ether 106-88-7, 1,2-Epoxybutane 29281-39-8, tert-Pentyl vinyl ether 34398-01-1, Neodol 1-7  
RL: RCT (Reactant); RACT (Reactant or reagent)  
(compns. including ether-capped poly(oxyalkylated) alc. wetting agents)

REFERENCE COUNT: 5 THERE ARE 5 CITED REFERENCES AVAILABLE FOR THIS

RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L40 ANSWER ~~11~~ OF 42 CAPLUS COPYRIGHT 2003 ACS  
 ACCESSION NUMBER: 2001:176868 CAPLUS  
 DOCUMENT NUMBER: 134:209756  
 TITLE: Polyoxyalkylene isoalkyl **ether**-based liquid  
 detergents  
 INVENTOR(S): Ishikawa, Akira; Fujii, Yukiko; Nishimura, Hiroshi;  
 Ide, Kazutoshi  
 PATENT ASSIGNEE(S): Kao Corp., Japan  
 SOURCE: Jpn. Kokai Tokkyo Koho, 6 pp.  
 CODEN: JKXXAF  
 DOCUMENT TYPE: Patent  
 LANGUAGE: Japanese  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2001064674	A2	<del>2001</del> 0313	JP 1999-247063	19990901
PRIORITY APPLN. INFO.:			JP 1999-247063	19990901

OTHER SOURCE(S): MARPAT 134:209756

AB The title detergents, useful for cleaning clothings, contain alkylene oxide adducts of secondary alcs. (e.g., polyoxyethylene C12-14 isoalkyl **ether**, polyoxyethylene-polyoxypropylene C12-14 isoalkyl **ether**) and C1-16 hydrocarbonyl **ether** of glycerol (e.g., glycerol monoisoamyl **ether**, glycerol mono-octyl **ether**).

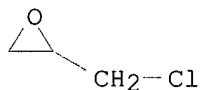
IT **106-89-8D**, Epichlorohydrin, reaction product with isoamyl alc.

RL: MOA (Modifier or additive use); USES (Uses)

(polyoxyalkylene isoalkyl **ether**-based liq. detergents)

RN 106-89-8 CAPLUS

CN Oxirane, (chloromethyl)- (9CI) (CA INDEX NAME)



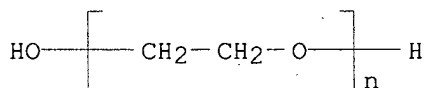
IT **25322-68-3D**, C12-14 isoalkyl **ether**

RL: PRP (Properties); TEM (Technical or engineered material use); USES (Uses)

(polyoxyalkylene isoalkyl **ether**-based liq. detergents)

RN 25322-68-3 CAPLUS

CN Poly(oxy-1,2-ethanediyl), .alpha.-hydro-.omega.-hydroxy- (9CI) (CA INDEX NAME)



IC ICM C11D001-72

ICS C11D001-722; C11D001-83; C11D003-20

CC 46-6 (Surface Active Agents and **Detergents**)

ST polyoxyalkylene isoalkyl **ether** liq detergent; polyoxyethylene isoalkyl **ether** liq detergent; polyoxypropylene polyoxyethylene isoalkyl **ether** liq detergent; glycerol monoisoamyl **ether**

- liq detergent; monoethyl glycerol **ether** liq detergent
- IT Polyoxyalkylenes, uses  
RL: PRP (Properties); TEM (Technical or engineered material use); USES (Uses)  
(C12-14 isoalkyl **ether**; polyoxyalkylene isoalkyl **ether**-based liq. detergents)
- IT Polyoxyalkylenes, uses  
RL: PRP (Properties); TEM (Technical or engineered material use); USES (Uses)  
(alkyl group-terminated; polyoxyalkylene isoalkyl **ether**-based liq. detergents)
- IT Detergents  
(liq.; polyoxyalkylene isoalkyl **ether**-based liq. detergents)
- IT **106-89-8D**, Epichlorohydrin, reaction product with isoamyl alc.  
123-51-3D, Isoamyl alcohol, reaction product with epichlorohydrin  
10438-94-5, 1,2-Propanediol, 3-(octyloxy)-  
RL: MOA (Modifier or additive use); USES (Uses)  
(polyoxyalkylene isoalkyl **ether**-based liq. detergents)
- IT 9003-11-6D, Polyoxyethylene-polyoxypropylene, C12-14 isoalkyl **ether** **25322-68-3D**, C12-14 isoalkyl **ether**  
RL: PRP (Properties); TEM (Technical or engineered material use); USES (Uses)  
(polyoxyalkylene isoalkyl **ether**-based liq. detergents)

L40 ANSWER 12 OF 42 CAPLUS COPYRIGHT 2003 ACS

ACCESSION NUMBER: 2001:174292 CAPLUS

DOCUMENT NUMBER: 134:194912

TITLE: Glycerol alkyl **ether**-containing detergents

INVENTOR(S): Ishikawa, Akira; Fujii, Yukiko; Nishimura, Hiroshi; Ide, Kazutoshi

PATENT ASSIGNEE(S): Kao Corp., Japan

SOURCE: Jpn. Kokai Tokkyo Koho, 6 pp.

CODEN: JKXXAF

DOCUMENT TYPE: Patent

LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2001064677	A2	<del>2001</del> 0313	JP 1999-247059	19990901
PRIORITY APPLN. INFO.:			JP 1999-247059	19990901
OTHER SOURCE(S):	MARPAT 134:194912			

AB The title detergents comprise surfactants (e.g., polyoxyethylene C10-12 alkyl **ether**, Na C10-12 alkylbenzenesulfonate), glycerol C1-16 hydrocarbyl **ether** (e.g., glycerol 1-isoamyl **ether**, glycerol 1-octyl **ether**), and 0.1-10% water.

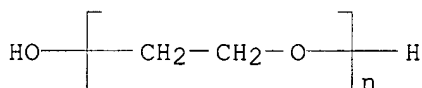
IT **106-89-8D**, Epichlorohydrin, reaction product with isoamyl alc.  
RL: MOA (Modifier or additive use); USES (Uses)  
(glycerol alkyl **ether**-contg. detergents)

RN 106-89-8 CAPLUS

CN Oxirane, (chloromethyl)- (9CI) (CA INDEX NAME)

CH<sub>2</sub>-Cl

IT 25322-68-3D, C10-12 alkyl **ether**  
 RL: POF (Polymer in formulation); TEM (Technical or engineered material use); USES (Uses)  
 (nonionic surfactants; glycerol alkyl **ether**-contg. detergents)  
 RN 25322-68-3 CAPLUS  
 CN Poly(oxy-1,2-ethanediyl), .alpha.-hydro-.omega.-hydroxy- (9CI) (CA INDEX NAME)



IC ICM C11D003-20  
 ICS C11D001-72; C11D017-06  
 CC 46-6 (Surface Active Agents and **Detergents**)  
 ST nonionic surfactant glycerol alkyl **ether** detergent; isoamyl glycerol **ether** nonionic surfactant detergent; octyl glycerol **ether** nonionic surfactant detergent  
 IT Polyoxyalkylenes, uses  
 RL: POF (Polymer in formulation); TEM (Technical or engineered material use); USES (Uses)  
 (C10-12 alkyl **ether**, nonionic surfactants; glycerol alkyl **ether**-contg. detergents)  
 IT Surfactants  
 (anionic; glycerol alkyl **ether**-contg. detergents)  
 IT Detergents  
 (glycerol alkyl **ether**-contg. detergents)  
 IT Surfactants  
 (nonionic; glycerol alkyl **ether**-contg. detergents)  
 IT 515-42-4D, Sodium benzenesulfonate, C10-12 alkyl **ether**  
 RL: TEM (Technical or engineered material use); USES (Uses)  
 (anionic surfactants; glycerol alkyl **ether**-contg. detergents)  
 IT 106-89-8D, Epichlorohydrin, reaction product with isoamyl alc.  
 123-51-3D, Isoamyl alcohol, reaction product with epichlorohydrin  
 10438-94-5, Glycerol 1-octyl **ether**  
 RL: MOA (Modifier or additive use); USES (Uses)  
 (glycerol alkyl **ether**-contg. detergents)  
 IT 25322-68-3D, C10-12 alkyl **ether**  
 RL: POF (Polymer in formulation); TEM (Technical or engineered material use); USES (Uses)  
 (nonionic surfactants; glycerol alkyl **ether**-contg. detergents)

L40 ANSWER 13 ~~OF~~ 42 CAPLUS COPYRIGHT 2003 ACS  
 ACCESSION NUMBER: 2000:608863 CAPLUS  
 DOCUMENT NUMBER: 133:194998  
 TITLE: Automatic dishwashing compositions comprising mixed surfactants systems for washing of tableware  
 INVENTOR(S): Jordan, Glenn Thomas, IV; Scheper, William Michael; Sivik, Mark Robert; Haeggberg, Donna Jean; Kluesener, Bernard William  
 PATENT ASSIGNEE(S): The Procter & Gamble Company, USA  
 SOURCE: PCT Int. Appl., 40 pp.  
 CODEN: PIXXD2  
 DOCUMENT TYPE: Patent  
 LANGUAGE: English

KOROMA EIC1700

FAMILY ACC. NUM. COUNT: 1

## PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2000050550	A2	20000831	WO 2000-US3456	20000210
WO 2000050550	A3	20020124		
W: AE, AL, AM, AT, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CR, CU, CZ, CZ, DE, DE, DK, DK, DM, EE, EE, ES, FI, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM RW: GH, GM, KE, LS, MW, SD, SL, SZ, TZ; UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG				
EP 1190026	A2	20020327	EP 2000-907253	20000210
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, PT, IE, SI, LT, LV, FI, RO				
JP 2002537483	T2	20021105	JP 2000-601114	20000210
PRIORITY APPLN. INFO.: US 1999-121032P P 19990222 WO 2000-US3456 W 20000210				
AB	Automatic dishwashing detergent compns. comprise 5-90% builder, a mixed surfactant system comprising 0.1-15% low foaming nonionic surfactant with an X/Y no. of >1.00 and 0.1-15% oxide surfactant at ratio 2-30:1, optionally 0.1-40% bleaching agent, and adjunct materials. An example detergent contained ethoxylated C9-11 alc. capped with C12-14-alkyl glycidyl ether 3.5, C16 amine oxide cosurfactant 0.8, sodium tripolyphosphate 32.0, silicate 0.3, Savinase 12T 2.0, Termamyl 1.4, Perborate 3.5%, Na2CO3 0.7, and the balance water.			
IC	ICM C11D001-00			
CC	46-5 (Surface Active Agents and <b>Detergents</b> )			
ST	nonionic surfactant epoxy butane capped detergent; butoxy capped nonionic surfactant; oxide cosurfactant nonionic surfactant mixt; alkyl glycidyl <b>ether capped nonionic surfactant</b>			
IT	Alcohols, uses RL: TEM (Technical or engineered material use); USES (Uses) (C9-11, ethoxylated, capped; detergent compns. contg. selected nonionic surfactants for rapid dissoln. of solids in washing of tableware with spotting redn.)			
IT	<b>Polyoxyalkylenes</b> , uses RL: TEM (Technical or engineered material use); USES (Uses) (capped; detergent compns. contg. selected nonionic surfactants for rapid dissoln. of solids in washing of tableware with spotting redn.)			
IT	Detergent builders (detergent compns. contg. selected nonionic surfactants for rapid dissoln. of solids in washing of tableware with spotting redn.)			
IT	Detergents (dishwashing; compns. contg. selected nonionic surfactants for rapid dissoln. of solids in washing of tableware with spotting redn.)			
IT	Surfactants (nonionic; detergent compns. contg. selected nonionic surfactants for rapid dissoln. of solids in washing of tableware with spotting redn.)			
IT	Amine oxides Sulfoxides RL: TEM (Technical or engineered material use); USES (Uses) (surfactants; detergent compns. contg. selected nonionic surfactants for rapid dissoln. of solids in washing of tableware with spotting redn.)			

IT 106-88-7D, 1,2-Epoxybutane, reaction products with ethoxylated alcs.  
 563-46-2D, 2-Methyl-1-butene, reaction products with ethoxylated alcs.  
 628-17-1D, 1-Iodopentane, reaction products with ethoxylated alcs.  
 9003-11-6D, **Ethylene oxide-propylene**  
**oxide** copolymer, alkyl ethers 27517-34-6D, Butylene  
**oxide-ethylene oxide** copolymer, alkyl ethers  
 78339-21-6D, Butylene **oxide-ethylene oxide-**  
**propylene oxide** copolymer, alkyl ethers  
 RL: TEM (Technical or engineered material use); USES (Uses)  
 (detergent compns. contg. selected nonionic surfactants for rapid  
 dissoln. of solids in washing of tableware with spotting redn.)

IT 143-27-1D, Hexadecylamine, N-oxide deriv.  
 RL: TEM (Technical or engineered material use); USES (Uses)  
 (surfactants; detergent compns. contg. selected nonionic surfactants  
 for rapid dissoln. of solids in washing of tableware with spotting  
 redn.)

L40 ANSWER ~~14~~ OF 42 CAPLUS COPYRIGHT 2003 ACS

ACCESSION NUMBER: 2000:335461 CAPLUS

DOCUMENT NUMBER: 132:323324

TITLE: Process for preparing **ether-capped**  
 poly(**oxyalkylated**) alcohol  
**surfactants**

INVENTOR(S): Miller, Larry Eugene; Levengood, Donald Eugene; Sivik,  
 Mark Robert; Kluesener, Bernard William; Formyduval,  
 Terry Franklin

PATENT ASSIGNEE(S): The Procter & Gamble Company, USA

SOURCE: PCT Int. Appl., 30 pp.

CODEN: PIXXD2

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 2

PATENT INFORMATION:

PATENT NO.	KIND	<del>DATE</del>	APPLICATION NO.	DATE
WO 2000027903	A1	<del>20000518</del>	WO 1999-US25944	19991103
W: CA, US				
RW: AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE				
EP 1124880	A1	20010822	EP 1999-971823	19991103
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, FI				

PRIORITY APPLN. INFO.: US 1998-107170P P 19981105

US 1999-131409P P 19990428

WO 1999-US25944 W 19991103

AB The title process comprises the steps of: (a) providing a glycidyl ether,  
 (b) providing an ethoxylated alc., (c) reacting the glycidyl ether with  
 the ethoxylated alc. to form the surfactant in the presence of a metallic  
 catalyst; (d) sparging with an inert gas; and (e) extg. the catalyst from  
 the surfactant by at least one aq. extn. with an aq. soln., wherein the  
 aq. soln. is selected from a 2-15% aq. soln. of sodium carbonate, a 2-10%  
 aq. soln. of potassium carbonate, a 1-22% aq. soln. of sodium sulfate, a  
 2-6% aq. soln. of sodium bicarbonate, a 1-10% aq. soln. of potassium  
 sulfate, a 2-24% aq. soln. of potassium bicarbonate, and mixts. thereof;  
 and wherein the surfactant, after aq. extn., contains less than 100 ppm of  
 the metallic component of the metallic catalyst.

IC ICM C08G065-30

ICS C07C041-34; C07C041-38; C11D001-72

CC 46-4 (Surface Active Agents and **Detergents**)  
ST **ether capped** alkoxyated alc **surfactant**  
manuf; glycidyl ether reaction alkoxyated alc; metal catalyst extn  
surfactant manuf  
IT Alcohols, uses  
RL: IMF (Industrial manufacture); TEM (Technical or engineered material  
use); PREP (Preparation); USES (Uses)  
(C11-15-secondary, ethoxylated, reaction products with glycidyl  
**ethers**; process for prepg. **ether-capped**  
poly(**oxyalkylated**) alc. **surfactants**)  
IT Alcohols, uses  
RL: IMF (Industrial manufacture); TEM (Technical or engineered material  
use); PREP (Preparation); USES (Uses)  
(alkoxyated; process for prepg. **ether-capped** poly(  
**oxyalkylated**) alc. **surfactants**)  
IT Detergents  
(dishwashing, automatic; process for prepg. **ether-**  
**capped** poly(**oxyalkylated**) alc. **surfactants**)  
IT Ethers, uses  
RL: IMF (Industrial manufacture); TEM (Technical or engineered material  
use); PREP (Preparation); USES (Uses)  
(glycidyl, reaction products with ethoxylated alcs.; process for prepg.  
**ether-capped** poly(**oxyalkylated**) alc.  
**surfactants**)  
IT **Polyoxyalkylenes**, uses  
RL: IMF (Industrial manufacture); TEM (Technical or engineered material  
use); PREP (Preparation); USES (Uses)  
(mono(alkyl group)-terminated; process for prepg. **ether-**  
**capped** poly(**oxyalkylated**) alc. **surfactants**)  
IT Detergents  
**Surfactants**  
(process for prepg. **ether-capped** poly(  
**oxyalkylated**) alc. **surfactants**)  
IT Lewis acids  
RL: CAT (Catalyst use); USES (Uses)  
(process for prepg. **ether-capped** poly(  
**oxyalkylated**) alc. **surfactants**)  
IT 546-68-9, Tetraisopropoxy titanium 7446-70-0, Aluminum chloride (AlCl3),  
uses 7550-45-0, Titanium chloride (TiCl4) (T-4)-, uses 7637-07-2, uses  
7646-78-8, uses 7646-85-7, Zinc chloride (ZnCl2), uses 7705-08-0, Iron  
chloride (FeCl3), uses 7772-99-8, Tin chloride (SnCl2), uses  
RL: CAT (Catalyst use); USES (Uses)  
(process for prepg. **ether-capped** poly(  
**oxyalkylated**) alc. **surfactants**)  
IT 144-55-8, Sodium bicarbonate, uses 298-14-6, Potassium bicarbonate  
497-19-8, Sodium carbonate, uses 584-08-7, Potassium carbonate  
7757-82-6, Sodium sulfate, uses 7778-80-5, Potassium sulfate, uses  
RL: NUU (Other use, unclassified); USES (Uses)  
(process for prepg. **ether-capped** poly(  
**oxyalkylated**) alc. **surfactants**)  
REFERENCE COUNT: 7 THERE ARE 7 CITED REFERENCES AVAILABLE FOR THIS  
RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L40 ANSWER 15 OF 42 CAPLUS COPYRIGHT 2003 ACS  
ACCESSION NUMBER: 2000:335300 CAPLUS  
DOCUMENT NUMBER: 132:336133  
TITLE: Process for preparing **ether-capped**  
poly(**oxyalkylated**) alcohol  
**surfactants**



INVENTOR(S): Jordan, Glenn Thomas Iv; Levengood, Donald Eugene;  
Sivik, Mark Robert; Kluesener, Bernard William;  
Formyduval, Terry Franklin; Miller, Larry Eugene;  
Back, Deborah Jean  
PATENT ASSIGNEE(S): The Procter & Gamble Company, USA  
SOURCE: PCT Int. Appl., 26 pp.  
CODEN: PIXXD2  
DOCUMENT TYPE: Patent  
LANGUAGE: English  
FAMILY ACC. NUM. COUNT: 2  
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2000027516	A1	20000518	WO 1999-US25943	19991103
W: CA, US				
RW: AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE				
EP 1126910	A1	20010829	EP 1999-956901	19991103
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, FI				
US 6495727	B1	20021217	US 2001-831117	20010504
PRIORITY APPLN. INFO.:				
			US 1998-107170P	P 19981105
			US 1999-131410P	P 19990428
			WO 1999-US25943	W 19991103

OTHER SOURCE(S): MARPAT 132:336133

AB The title process comprises reacting glycidyl ethers and ethoxylated alcs. in the presence of a basic catalyst followed by bleaching. The obtained **ether-capped poly(oxyalkylated) alc.**

**surfactant** has the formula  $R_1O[CH_2CH(R_3)O]_xCH_2CH(OH)CH_2OR_2$  wherein  $R_1$  and  $R_2$  are linear or branched, satd. or unsatd., aliph. or arom. hydrocarbon radicals having from 1 to 30 carbon atoms;  $R_3$  is H, or a linear aliph. hydrocarbon radical having from 1 to 4 carbon atoms;  $x$  is an integer having an av. value from 6 to 15, wherein when  $x$  is 2 or greater  $R_3$  may be the same or different; further wherein when  $x$  is 15 or greater and  $R_3$  is H and Me, at least four of  $R_3$  are Me, further wherein when  $x$  is 15 or greater and  $R_3$  includes H and from 1 to 3 Me groups, then at least one  $R_3$  is Et, Pr or Bu, further wherein  $R_2$  can optionally be alkoxyated, wherein said alkoxy is selected from ethoxy, propoxy, butyloxy and mixts. thereof.

IC ICM B01F017-00

ICS C11D001-72

CC 46-3 (Surface Active Agents and **Detergents**)

ST glycidyl ether alkoxyated alc reaction surfactant

IT Alcohols, uses

RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)

(C12-15, ethoxylated, reaction products with alkyl glycidyl

**ethers**; process for prepg. **ether-capped**

poly(**oxyalkylated**) alc. **surfactants**)

IT Alcohols, uses

RL: TEM (Technical or engineered material use); USES (Uses)

(alkoxyated; process for prepg. **ether-capped** poly(

**oxyalkylated**) alc. **surfactants**)

IT Ethers, uses

RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)

(glycidyl, reaction products with alkoxyated alcs.; process for prepg.

**ether-capped** poly(**oxyalkylated**) alc.

IT **surfactants)**  
**Polyoxyalkylenes**, uses  
 RL: TEM (Technical or engineered material use); USES (Uses)  
 (mono(alkyl group)-terminated; process for prepg. **ether-**  
**capped poly(oxyalkylated) alc. surfactants)**

IT Detergents  
**Surfactants**  
 (process for prepg. **ether-capped poly(**  
**oxyalkylated) alc. surfactants)**

REFERENCE COUNT: 8 THERE ARE 8 CITED REFERENCES AVAILABLE FOR THIS  
 RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L40 ANSWER 16 OF 42 CAPLUS COPYRIGHT 2003 ACS

ACCESSION NUMBER: 2000:223739 CAPLUS

DOCUMENT NUMBER: 132:258167

TITLE: ArF excimer laser-sensitive positive-working  
 photoresist composition

INVENTOR(S): Tan, Shiro; Aogo, Toshiaki; Sato, Kenichiro

PATENT ASSIGNEE(S): Fuji Photo Film Co., Ltd., Japan

SOURCE: Jpn. Kokai Tokkyo Koho, 14 pp.

CODEN: JKXXAF

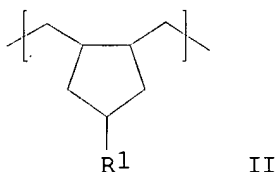
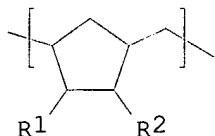
DOCUMENT TYPE: Patent

LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2000098614	A2	20000407	JP 1998-273266	19980928
PRIORITY APPLN. INFO.: GI			JP 1998-273266	19980928



AB The ArF excimer laser-sensitive pos.-working photoresist compn. has an  
 acid-generating compd. of active-ray or radiation-sensitivity, a resin,  
 which increases the soly. in an alkali developer after reacting with an  
 acid, having repeating unit I and II ( R1-2 = H, OH, halo, alkyl, alkoxy,  
 acid-sensitive group). The resin in the compn. provides the excellent  
 sensitivity, resolu., dry-etching resistance.

IT **262437-50-3P**

RL: PNU (Preparation, unclassified); TEM (Technical or engineered material  
 use); **PREP (Preparation)**; USES (Uses)

(ArF excimer laser-sensitive pos.-working photoresist compn.)

RN 262437-50-3 CAPLUS

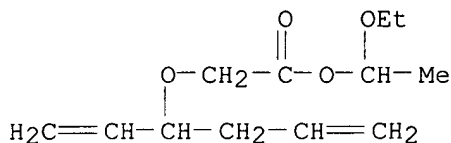
CN Acetic acid, [(1-ethenyl-3-butenyl)oxy]-, 1-ethoxyethyl ester, homopolymer  
 (9CI) (CA INDEX NAME)

CM 1

CRN 262437-49-0

KOROMA EIC1700

CMF C12 H20 O4



IC ICM G03F007-039  
ICS G03F007-004; H01L021-027

CC 74-5 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)  
Section cross-reference(s): 35

ST pos working photoresist compn excimer laser

IT Photoresists  
(ArF excimer laser-sensitive pos.-working photoresist compn.)

IT Polymers, preparation  
RL: PNU (Preparation, unclassified); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)  
(ArF excimer laser-sensitive pos.-working photoresist compn.)

IT 122752-67-4P 262437-46-7P 262437-48-9P **262437-50-3P**  
262437-52-5P  
RL: PNU (Preparation, unclassified); TEM (Technical or engineered material use); **PREP (Preparation)**; USES (Uses)  
(ArF excimer laser-sensitive pos.-working photoresist compn.)

IT 81-25-4, Cholic acid 865-47-4  
RL: RCT (Reactant); RACT (Reactant or reagent)  
(ArF excimer laser-sensitive pos.-working photoresist compn.)

L40 ANSWER 17 OF 42 CAPLUS COPYRIGHT 2003 ACS

ACCESSION NUMBER: 2000:223736 CAPLUS

DOCUMENT NUMBER: 132:258164

TITLE: Positive-working ArF excimer laser-sensitive resist composition

INVENTOR(S): Tan, Shiro; Aogo, Toshiaki; Sato, Kenichiro

PATENT ASSIGNEE(S): Fuji Photo Film Co., Ltd., Japan

SOURCE: Jpn. Kokai Tokkyo Koho, 13 pp.  
CODEN: JKXXAF

DOCUMENT TYPE: Patent

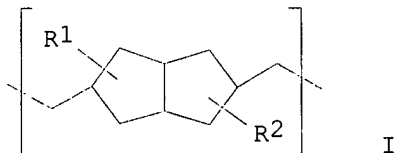
LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2000098610	A2	20000407	JP 1998-263393	19980917
PRIORITY APPLN. INFO.:			JP 1998-263393	19980917

GI



AB The pos.-working ArF excimer laser-sensitive resist compn. consists of an acid-sensitive group contg. polymer I ( R1-2 = H, OH, halo, alkyl chain, cyclic alkyl, alkoxy, acid-sensitive group), an acid-generating compd. of active-ray or radiation-sensitivity, and a solvent. The resist compn. provides the excellent sensitivity, the high resoln., and the superior resist profiles.

IT **262608-99-1P**  
 RL: PNU (Preparation, unclassified); TEM (Technical or engineered material use); **PREP (Preparation)**; USES (Uses)  
 (pos.-working ArF excimer laser-sensitive resist compn.)

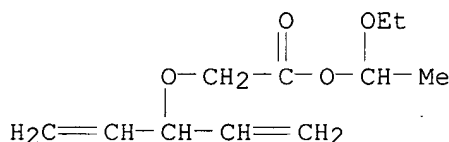
RN 262608-99-1 CAPLUS

CN Acetic acid, [(1-ethenyl-2-propenyl)oxy]-, 1-ethoxyethyl ester, homopolymer (9CI) (CA INDEX NAME)

CM 1

CRN 262608-98-0

CMF C11 H18 O4



IC ICM G03F007-039  
 ICS H01L021-027

CC 74-5 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)

ST pos working excimer laser resist compn

IT Photoresists  
 (pos.-working ArF excimer laser-sensitive resist compn.)

IT 122752-67-4P 262608-97-9P **262608-99-1P**  
 RL: PNU (Preparation, unclassified); TEM (Technical or engineered material use); **PREP (Preparation)**; USES (Uses)  
 (pos.-working ArF excimer laser-sensitive resist compn.)

IT 81-25-4, Cholic acid 865-47-4  
 RL: RCT (Reactant); RACT (Reactant or reagent)  
 (pos.-working ArF excimer laser-sensitive resist compn.)

L40 ANSWER 18 OF 42 CAPLUS COPYRIGHT 2003 ACS .

ACCESSION NUMBER: 2000:32150 CAPLUS

DOCUMENT NUMBER: 133:106599

TITLE: Synthesis and properties of nonionic surfactant of polyether of lignin

AUTHOR(S): Song, Weiming; Wang, Shengxue; Wang, Huimin

CORPORATE SOURCE: Department of Chemical Engineering of Chemical Engineering College, Qiqihar University, Qiqihar, 161000, Peop. Rep. China

SOURCE: Huagong Shikan (1999), 13(11), 17-20

CODEN: HUSHFT; ISSN: 1002-154X

PUBLISHER: Huagong Shikan Zazhishe

DOCUMENT TYPE: Journal

LANGUAGE: Chinese

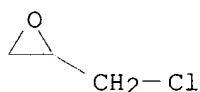
AB A type of nonionic surfactant of polyether of lignin was synthesized with

lignin recovered from black liquor of paper manuf., epichlorohydrin, glycol, PEG 200 and PEG 400 as raw materials. The optimum reaction conditions were: the molar ratio of **ether** to alc. 1:1.2, reaction temp. 145.degree., and reaction time 1.5-8 h. The product had excellent ability of reducing the surface tension of liquor, and good emulsifying efficiency.

IT **106-89-8DP**, Epichlorohydrin, reaction products with lignin and (poly)ethylene glycol **25322-68-3DP**, PEG 200, reaction products with lignin and epichlorohydrin  
 RL: SPN (Synthetic preparation); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)  
 (synthesis and properties of nonionic surfactant of polyether of lignin)

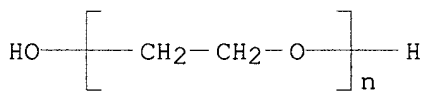
RN 106-89-8 CAPLUS

CN Oxirane, (chloromethyl)- (9CI) (CA INDEX NAME)



RN 25322-68-3 CAPLUS

CN Poly(oxy-1,2-ethanediyl), .alpha.-hydro-.omega.-hydroxy- (9CI) (CA INDEX NAME)



CC 46-3 (Surface Active Agents and **Detergents**)

ST lignin polyether surfactant

IT Surfactants

(nonionic; synthesis and properties of nonionic surfactant of polyether of lignin)

IT Polyoxyalkylenes, uses

RL: SPN (Synthetic preparation); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)

(reaction products with lignin and epichlorohydrin; synthesis and properties of nonionic surfactant of polyether of lignin)

IT **106-89-8DP**, Epichlorohydrin, reaction products with lignin and (poly)ethylene glycol 107-21-1DP, Ethylene glycol, reaction products with lignin and epichlorohydrin 9005-53-2DP, Lignin, reaction products with (poly)ethylene glycol and epichlorohydrin, uses **25322-68-3DP**, PEG 200, reaction products with lignin and epichlorohydrin

RL: SPN (Synthetic preparation); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)

(synthesis and properties of nonionic surfactant of polyether of lignin)

L40 ANSWER 19 OF 42 CAPLUS COPYRIGHT 2003 ACS

ACCESSION NUMBER: 1999:310075 CAPLUS

DOCUMENT NUMBER: 131:75277

TITLE: Synthesis of N-[2-(**octylphenoxy**polyoxyethylene)ethyl]caprolactam

AUTHOR(S): Dong, Yigong; Jia, Yingqi; Wang, Qi

CORPORATE SOURCE: Dep. Chem., Northwest Univ., Xi'an, 710069, Peop. Rep.

KOROMA EIC1700

China  
 SOURCE: Huaxue Shiji (1999), 21(2), 98-99  
 CODEN: HUSHDR; ISSN: 0258-3283  
 PUBLISHER: Huagongbu Huaxue Shiji Xinsizhan  
 DOCUMENT TYPE: Journal  
 LANGUAGE: Chinese

AB The synthesis of N-[2-(**octylphenoxypolyoxyethylene**  
 )ethyl]caprolactam was conducted in presence of polyethylene glycol  
 PEG-400 by the reaction of 1,2-dichloroethane and n-octylphenol  
 polyethylene glycol monoether (OP 10) and then with caprolactam. The  
 product and its precursor (OP 10) were characterized by reflective index,  
 m.p., UV and IR spectroscopy, and their emulsion stability.

CC 46-3 (Surface Active Agents and **Detergents**)

ST alkylphenyl **polyoxyethylene** ether caprolactam reaction product;  
**surfactant** alkylphenyl **polyoxyethylene** ether  
**caprolactam** modification

IT **Surfactants**  
 (nonionic; prepn. and property of **caprolactam**-modified  
 octylphenol **polyoxyethylene** ether  
**surfactant**)

IT 9036-19-5, Ethoxylated octylphenol  
 RL: RCT (Reactant); RACT (Reactant or reagent)  
 (OP 10; in synthesis of **caprolactam**-modified octylphenol  
**polyoxyethylene** ether **surfactant**)

IT 105-60-2, Caprolactam, reactions 107-06-2, 1,2-Dichloroethane, reactions  
 RL: RCT (Reactant); RACT (Reactant or reagent)  
 (in synthesis of **caprolactam**-modified octylphenol  
**polyoxyethylene** ether **surfactant**)

IT 229153-84-8P  
 RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT  
 (Reactant or reagent)  
 (in synthesis of **caprolactam**-modified octylphenol  
**polyoxyethylene** ether **surfactant**)

IT 229153-83-7P  
 RL: PRP (Properties); SPN (Synthetic preparation); TEM (Technical or  
 engineered material use); PREP (Preparation); USES (Uses)  
 (surfactant; prepn. and property of)

L40 ANSWER 20 OF 42 CAPLUS COPYRIGHT 2003 ACS  
 ACCESSION NUMBER: 1999:113779 CAPLUS  
 DOCUMENT NUMBER: 130:184096  
 TITLE: Detergent tablet containing nonionic surfactant and a  
 tableting process  
 INVENTOR(S): Smith, David John  
 PATENT ASSIGNEE(S): The Procter & Gamble Company, USA  
 SOURCE: PCT Int. Appl., 71 pp.  
 CODEN: PIXXD2  
 DOCUMENT TYPE: Patent  
 LANGUAGE: English  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 9906521	A1	19990211	WO 1998-US16077	19980731
W: BR, CA, CZ, HU, JP, MX, NO, TR, US				
RW: AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL,				
PT, SE				
GB 2327947	A1	19990210	GB 1997-16303	19970802

REFERENCE COUNT: 7 THERE ARE 7 CITED REFERENCES AVAILABLE FOR THIS  
RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

ACCESSION NUMBER: 1999:113737 CAPLUS  
 DOCUMENT NUMBER: 130:169841  
 TITLE: Process for preparing ether-capped poly(  
**oxyalkylated**) alcohols for use as nonionic  
 surfactants with low foaming property  
 INVENTOR(S): Sivik, Mark Robert  
 PATENT ASSIGNEE(S): The Procter & Gamble Company, USA  
 SOURCE: PCT Int. Appl., 23 pp.  
 CODEN: PIXXD2  
 DOCUMENT TYPE: Patent  
 LANGUAGE: English

KOROMA EIC1700

FAMILY ACC. NUM. COUNT: 1

## PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 9906468	A1	19990211	WO 1998-US16034	19980731
W: BR, CA, MX, US				
RW: AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE				
EP 998517	A1	20000510	EP 1998-938252	19980731
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, PT, IE, FI				
BR 9811816	A	20000815	BR 1998-11816	19980731
US 6365785	B1	20020402	US 2000-485137	20000202
PRIORITY APPLN. INFO.:			US 1997-54702P	P 19970802
			WO 1998-US16034	W 19980731

- AB The surfactants are compds.  $R1O[CH_2CH(R_3)O]_xCH_2CH(OH)CH_2OR_2$  ( $R_1$ ,  $R_2$  = linear or branched, satd. or unsatd., aliph. or arom. hydrocarbyl groups having from 1 to 30 carbon atoms;  $R_3$  = H, or a linear aliph. hydrocarbyl groups having from 1 to 4 carbon atoms;  $x$  = 6-15; when  $x$  is 2 or greater  $R_3$  may be the same or different; further wherein when  $x$  is 15 or greater and  $R_3$  is H and Me, at least 4 of  $R_3$  are Me, further wherein when  $x$  is 15 or greater and  $R_3$  includes H and from 1 to 3 Me groups, then at least 1  $R_3$  is Et, Pr or Bu, further wherein  $R_2$  can optionally be alkoxyated, wherein said alkoxy is selected from ethoxy, propoxy, butyloxy and mixts. thereof) and prepd. by reacting a glycidyl ether bearing  $R_2$  as ether group with a poly(**oxyalkylated**) alc. The surfactants have superior spotting and filming benefits in dishwashing and hard surface cleaning applications, as well as suds suppression in detergent compns. Thus, heating 16.60 g Neodol 91-8 (ethoxylated C9-11 alc.) with 0.25 mL Sn(IV) chloride to 60.degree., adding dropwise 10.00 g C12-14 alkyl glycidyl ether to the resulting mixt. over 15 min while maintaining at 75-80.degree., stirring at 60.degree. for 18 h and at 75.degree. for 1 h, , cooling and working up gave an oil. An automatic dishwashing detergent was formulated from Na tripolyphosphate 24.0,  $Na_2CO_3$  20.0, hydrate silica 15, 15, the oil 2.0, Tergitol 15S9 (nonionic surfactant) 1.0, an acrylic polymer 4.0, 4%-active protease 0.83, 0.8%-active amylase 0.5, 15.5%-active perborate monohydrate 14.5, Co catalyst 0.008, and balance of water,  $Na_2SO_4$  and misc. to 100%.
- IC ICM C08G065-26  
ICS C08G065-22; C11D001-72
- CC 46-3 (Surface Active Agents and **Detergents**)
- ST nonionic **surfactant ether capped** alkoxyated  
alc low foaming; spotting suppression nonionic **surfactant ether capped** alkoxyated alc; sud suppression nonionic **surfactant ether capped** alkoxyated alc;  
automatic dishwashing detergent ether capped alkoxyated alc; cleaning detergent ether capped alkoxyated alc
- IT Alcohols, preparation  
Alcohols, preparation  
RL: IMF (Industrial manufacture); RCT (Reactant); PREP (Preparation); RACT (Reactant or reagent)  
(C11-15-secondary, ethoxylated, glycidyl ether, of Tergitol 15S15; process for prepg. ether-capped poly(**oxyalkylated**) alcs. for use as nonionic surfactants with low foaming property)
- IT Alcohols, preparation  
RL: IMF (Industrial manufacture); RCT (Reactant); PREP (Preparation); RACT (Reactant or reagent)  
(C12-13, glycidyl ether, of Neodol 23; process for prepg. ether-capped poly(**oxyalkylated**) alcs. for use as nonionic surfactants with



- low foaming property)
- IT Alcohols, preparation  
RL: IMF (Industrial manufacture); RCT (Reactant); PREP (Preparation); RACT (Reactant or reagent)  
(C12-14, glycidyl ether; process for prepg. ether-capped poly(**oxyalkylated**) alcs. for use as nonionic surfactants with low foaming property)
- IT Alcohols, preparation  
RL: IMF (Industrial manufacture); RCT (Reactant); PREP (Preparation); RACT (Reactant or reagent)  
(C14-15, glycidyl ether, of Neodol 45; process for prepg. ether-capped poly(**oxyalkylated**) alcs. for use as nonionic surfactants with low foaming property)
- IT Alcohols, uses  
RL: IMF (Industrial manufacture); PRP (Properties); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)  
(C9-11, ethoxylated, ethers with higher alc. glycidyl ethers; process for prepg. ether-capped poly(**oxyalkylated**) alcs. for use as nonionic surfactants with low foaming property)
- IT Alcohols, preparation  
RL: IMF (Industrial manufacture); RCT (Reactant); PREP (Preparation); RACT (Reactant or reagent)  
(C9-11, glycidyl ether, of Neodol 91; process for prepg. ether-capped poly(**oxyalkylated**) alcs. for use as nonionic surfactants with low foaming property)
- IT Alcohols, uses  
RL: IMF (Industrial manufacture); PRP (Properties); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)  
(alkoxylated, ethers with higher alc. glycidyl ethers; process for prepg. ether-capped poly(**oxyalkylated**) alcs. for use as nonionic surfactants with low foaming property)
- IT Lewis acids  
RL: CAT (Catalyst use); USES (Uses)  
(catalyst; process for prepg. ether-capped poly(**oxyalkylated**) alcs. for use as nonionic surfactants with low foaming property)
- IT Detergents  
(dishwashing; process for prepg. ether-capped poly(**oxyalkylated**) alcs. for use as nonionic surfactants with low foaming property)
- IT Detergents  
(laundry; process for prepg. ether-capped poly(**oxyalkylated**) alcs. for use as nonionic surfactants with low foaming property)
- IT Detergents  
(liq.; process for prepg. ether-capped poly(**oxyalkylated**) alcs. for use as nonionic surfactants with low foaming property)
- IT Detergents  
**Surfactants**  
(nonionic; process for prepg. ether-capped poly(**oxyalkylated**) alcs. for use as nonionic surfactants with low foaming property)
- IT 109-63-7 7446-70-0, Aluminum chloride, uses 7550-45-0, Titanium chloride, uses 7646-78-8, Tin(IV) chloride, uses 7646-85-7, Zinc chloride, uses  
RL: CAT (Catalyst use); USES (Uses)  
(catalyst; process for prepg. ether-capped poly(**oxyalkylated**) alcs. for use as nonionic surfactants with low foaming property)
- IT 106-89-8, Epichlorohydrin, reactions  
RL: RCT (Reactant); RACT (Reactant or reagent)  
(reactant; reactant for prepg. ether-capped poly(**oxyalkylated**) alcs. for use as nonionic surfactants with low foaming property)

REFERENCE COUNT: 5 THERE ARE 5 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L40 ANSWER 22 OF 42 CAPLUS COPYRIGHT 2003 ACS

ACCESSION NUMBER: 1999:113736 CAPLUS

DOCUMENT NUMBER: 130:169840

TITLE: **Ether-capped poly(oxyalkylated) alcohol surfactants**

INVENTOR(S): Scheper, William Michael; Sivik, Mark Robert

PATENT ASSIGNEE(S): The Procter & Gamble Company, USA

SOURCE: PCT Int. Appl., 45 pp.

CODEN: PIXXD2

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 9906467	A1	19990211	WO 1998-US16014	19980731
W: BR, CA, JP, MX, US				
RW: AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE				
EP 998516	A1	20000510	EP 1998-938237	19980731
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, PT, IE, FI				
BR 9811815	A	20000815	BR 1998-11815	19980731
JP 2001512160	T2	20010821	JP 2000-505219	19980731
US 2002065250	A1	20020530	US 2000-485139	20000202
US 6482994	B2	20021119		

PRIORITY APPLN. INFO.: US 1997-57027P P 19970802  
WO 1998-US16014 W 19980731

AB **Ether-capped poly(oxyalkylated) alc.**

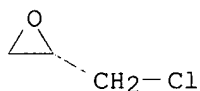
**surfactants** having superior grease cleaning abilities and improved spotting/filming benefits are provided. The alc. surfactants have the formula  $R_1O(CH_2CHR_3O)_x(CH_2)_kCH(OH)(CH_2)_jOR_2$ , wherein  $R_1$  and  $R_2$  are linear or branched, satd. or unsatd., aliph. or arom. hydrocarbon radicals having from 1 to 30 carbon atoms;  $R_3$  is H, or a linear aliph. hydrocarbon radical having from 1 to 4 carbon atoms;  $x$  is an integer having an av. value from 1 to 40, wherein when  $x$  is 2 or greater,  $R_3$  may be the same or different and  $k$  and  $j$  are integers having an av. value of from 1 to 12; further wherein when  $x$  is 15 or greater and  $R_3$  is H and Me, at least four of  $R_3$  are Me, further wherein when  $x$  is 15 or greater and  $R_3$  includes H and from 1 to 3 Me groups, then at least one  $R_3$  is Et, Pr or Bu, further wherein  $R_2$  can optionally be alkoxyated, wherein said alkoxy is selected from ethoxy, propoxy, butoxy and mixts. thereof.

IT **106-89-8DP**, Epichlorohydrin, reaction products with fatty alcs., **polyoxyalkylated 25322-68-3DP**, Polyethylene glycol, fatty alkyl **ethers**, reaction products with fatty alkyl glycidyl **ethers**

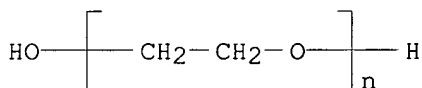
RL: IMF (Industrial manufacture); PREP (Preparation)  
(**ether-capped poly(oxyalkylated) triol surfactants**)

RN 106-89-8 CAPLUS

CN Oxirane, (chloromethyl)- (9CI) (CA INDEX NAME)



RN 25322-68-3 CAPLUS  
 CN Poly(oxy-1,2-ethanediyl), .alpha.-hydro-.omega.-hydroxy- (9CI) (CA INDEX NAME)



IC ICM C08G065-26  
 ICS C08G065-22; C11D001-72  
 CC 46-3 (Surface Active Agents and **Detergents**)  
 ST **polyoxyalkylene** triol **ether** surfactant manuf  
 IT Alcohols, preparation  
 RL: IMF (Industrial manufacture); PREP (Preparation)  
 (C11-15, ethoxylated, reaction products, with C12-14 alkyl glycidyl  
**ethers; ether-capped poly(**  
**oxyalkylated) triol surfactants**)  
 IT Alcohols, preparation  
 RL: IMF (Industrial manufacture); PREP (Preparation)  
 (C12-13, reaction products, with epichlorohydrin, precursors;  
**ether-capped poly(oxyalkylated) triol**  
**surfactants**)  
 IT Alcohols, preparation  
 RL: IMF (Industrial manufacture); PREP (Preparation)  
 (C12-14, reaction products, with epichlorohydrin,  
**polyoxyalkylated; ether-capped poly(**  
**oxyalkylated) triol surfactants**)  
 IT Alcohols, preparation  
 RL: IMF (Industrial manufacture); PREP (Preparation)  
 (C9-11, ethoxylated, reaction products, with C12-14 alkyl glycidyl  
**ethers; ether-capped poly(**  
**oxyalkylated) triol surfactants**)  
 IT Alcohols, preparation  
 RL: IMF (Industrial manufacture); PREP (Preparation)  
 (C9-11, reaction products, with epichlorohydrin,  
**polyoxyalkylated; ether-capped poly(**  
**oxyalkylated) triol surfactants**)  
 IT **Surfactants**  
 (ether-capped poly(oxyalkylated) triol  
**surfactants**)  
 IT **Polyoxyalkylenes**, preparation  
 RL: IMF (Industrial manufacture); PREP (Preparation)  
 (ethers, reaction products, with fatty alkyl glycidyl  
**ethers; ether-capped poly(**  
**oxyalkylated) triol surfactants**)  
 IT **Polyoxyalkylenes**, preparation  
 RL: IMF (Industrial manufacture); PREP (Preparation)  
 (fatty alkyl **ethers**, reaction products with fatty alkyl  
 glycidyl **ethers; ether-capped poly(**  
**oxyalkylated) triol surfactants**)  
 IT **Ethers**, preparation

KOROMA EIC1700

RL: IMF (Industrial manufacture); RCT (Reactant); PREP (Preparation); RACT (Reactant or reagent)  
(glycidyl, precursors; **ether-capped poly(oxyalkylated) triol surfactants**)

IT Alcohols, reactions  
Epoxides

RL: RCT (Reactant); RACT (Reactant or reagent)  
(precursors; **ether-capped poly(oxyalkylated)**  
**) triol surfactants**)

IT **106-89-8DP**, Epichlorohydrin, reaction products with fatty alcs., **polyoxyalkylated 25322-68-3DP**, Polyethylene glycol, fatty alkyl **ethers**, reaction products with fatty alkyl glycidyl **ethers**

RL: IMF (Industrial manufacture); PREP (Preparation)  
(**ether-capped poly(oxyalkylated) triol surfactants**)

REFERENCE COUNT: 5 THERE ARE 5 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L40 ANSWER 23 OF 42 CAPLUS COPYRIGHT 2003 ACS

ACCESSION NUMBER: 1999:113735 CAPLUS

DOCUMENT NUMBER: 130:155328

TITLE: Degreasing compositions including **ether-capped poly(oxyalkylated) alcohol surfactants**

INVENTOR(S): Scheper, William Michael; Sivik, Mark Robert

PATENT ASSIGNEE(S): The Procter & Gamble Company, USA

SOURCE: PCT Int. Appl., 55 pp.

CODEN: PIXXD2

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

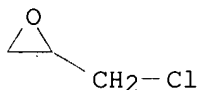
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 9906466	A1	19990211	WO 1998-US15976	19980731
W: BR, CA, JP, MX, US				
RW: AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE				
EP 998514	A1	20000510	EP 1998-938218	19980731
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, PT, IE, FI				
BR 9811814	A	20000815	BR 1998-11814	19980731
PRIORITY APPLN. INFO.:			US 1997-54688P	P 19970802
			WO 1998-US15976	W 19980731

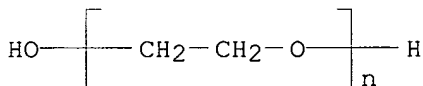
AB Compns. including **ether-capped poly(oxyalkylated) alc. surfactants** having superior grease cleaning abilities and improved spotting/filming benefits are provided. The alc. surfactants have the formula:  $R_1O(CH_2CHR_3O)_x(CH_2)_kCH(OH)(CH_2)_jOR_2$  wherein  $R_1$  and  $R_2$  are linear or branched, satd. or unsatd., aliph. or arom. hydrocarbon radicals having from 1 to 30 carbon atoms;  $R_3$  is H, or a linear aliph. hydrocarbon radical having from 1 to 4 carbon atoms;  $x$  is an integer having an av. value from 1 to 40, wherein when  $x$  is 2 or greater,  $R_3$  may be the same or different and  $k$  and  $j$  are integers having an av. value of from 1 to 12; further wherein when  $x$  is 15 or greater and  $R_3$  is H and Me, at least four of  $R_3$  are Me, further wherein when  $x$  is 15 or greater and  $R_3$  includes H and from 1 to 3 Me groups, then at least one  $R_3$  is Et, Pr or Bu, further wherein  $R_2$  can optionally be alkoxyated, wherein said alkoxy is selected from ethoxy, propoxy, butyloxy and mixts. thereof.

Various other detergent adjunct ingredients may also be included.

- IT **106-89-8DP**, Epichlorohydrin, reaction products with alcs., polyethoxylated **25322-68-3DP**, Polyethylene glycol, fatty alkyl **ethers**, reaction products with fatty alkyl glycidyl **ethers**  
 RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)  
 (degreasing compns. including **ether-capped** poly(**oxyalkylated**) alc. **surfactants**)
- RN 106-89-8 CAPLUS
- CN Oxirane, (chloromethyl)- (9CI) (CA INDEX NAME)



- RN 25322-68-3 CAPLUS
- CN Poly(oxy-1,2-ethanediyl), .alpha.-hydro-.omega.-hydroxy- (9CI) (CA INDEX NAME)



- IC ICM C08G065-22  
 ICS C08G065-26; C11D001-72
- CC 46-6 (Surface Active Agents and **Detergents**)
- ST degreasing detergent hydroxy group contg **polyoxyalkylated** triol
- IT Alcohols, uses  
 RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)  
 (C11-15, ethoxylated, reaction products, with C12-14 alkyl glycidyl **ethers**; degreasing compns. including **ether-capped** poly(**oxyalkylated**) alc. **surfactants**)
- IT Alcohols, preparation  
 RL: IMF (Industrial manufacture); PREP (Preparation)  
 (C12-13, reaction products, with epichlorohydrin, **surfactant** precursor; degreasing compns. including **ether-capped** poly(**oxyalkylated**) alc. **surfactants**)
- IT Alcohols, preparation  
 RL: IMF (Industrial manufacture); PREP (Preparation)  
 (C12-14, reaction products, with epichlorohydrin, **polyoxyalkylated**; degreasing compns. including **ether-capped** poly(**oxyalkylated**) alc. **surfactants**)
- IT Alcohols, uses  
 RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)  
 (C9-11, ethoxylated, reaction products, with C12-14 alkyl glycidyl **ethers**; degreasing compns. including **ether-capped** poly(**oxyalkylated**) alc. **surfactants**)
- IT Alcohols, preparation  
 RL: IMF (Industrial manufacture); PREP (Preparation)  
 (C9-11, reaction products, with epichlorohydrin, **surfactant** precursor; degreasing compns. including **ether-capped** poly(**oxyalkylated**) alc. **surfactants**)
- IT Detergents

(degreasing compns.; degreasing compns. including **ether-capped poly(oxyalkylated) alc. surfactants**)

IT **Polyoxyalkylenes**, uses

RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)

(fatty alkyl **ethers**, reaction products with fatty alkyl glycidyl **ethers**; degreasing compns. including **ether-capped poly(oxyalkylated) alc. surfactants**)

IT **106-89-8DP**, Epichlorohydrin, reaction products with alcs., polyethoxylated **25322-68-3DP**, Polyethylene glycol, fatty alkyl **ethers**, reaction products with fatty alkyl glycidyl **ethers**

RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)

(degreasing compns. including **ether-capped poly(oxyalkylated) alc. surfactants**)

REFERENCE COUNT: 5 THERE ARE 5 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L40 ANSWER 24 OF 42 CAPLUS COPYRIGHT 2003 ACS

ACCESSION NUMBER: 1998:590836 CAPLUS

DOCUMENT NUMBER: 129:283430

TITLE: Positive-working photosensitive composition containing acid generator and polymer having adamantyl group

INVENTOR(S): Aogo, Toshiaki; Sato, Kenichiro; Tan, Shiro

PATENT ASSIGNEE(S): Fuji Photo Film Co., Ltd., Japan

SOURCE: Jpn. Kokai Tokkyo Koho, 39 pp.

CODEN: JKXXAF

DOCUMENT TYPE: Patent

LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 2

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 10239847	A2	19980911	JP 1997-46000	19970228
US 6042991	A	20000328	US 1998-25451	19980218
US 6416925	B1	20020709	US 2000-497281	20000202
PRIORITY APPLN. INFO.:			JP 1997-33958	A 19970218
			JP 1997-46000	A 19970228
			US 1998-25451	A3 19980218

GI

\* STRUCTURE DIAGRAM TOO LARGE FOR DISPLAY - AVAILABLE VIA OFFLINE PRINT \*

AB The title compn. contains a compd. generating acid upon active ray or radiation irradiation and a resin having .gtoreq.1 repeating unit contg. an adamantyl group I, II, or III [R1, R2, R5, R8, R9 = H, halo, CN, alkyl, haloalkyl; R4, R7, R10 = halo, CN, (substituted) alkyl, (substituted) alkenyl, (substituted) alkynyl, COOR11; R3, R6, R11 = H, (substituted) alkyl, (substituted) monocyclic or polycyclic cycloalkyl, (substituted) alkenyl, group that is decompd. by the action of acid to increase the soly. in alk. developing solns.; X1-5 = single bond, divalent alkylene, cycloalkylene, O, S, NR12R13; R12 = H, alkyl, monocyclic or polycyclic cycloalkyl, alkenyl; R13 = single bond or divalent alkylene, cycloalkylene or alkenylene which may have ether, ester, amido, urethane or ureido

KOROMA EIC1700

group; 1, m, n = 0-3] and .gtoreq.1 group that is decompd. by the action of acid to increase the soly. in alk. developing solns. The compn. shows high sensitivity toward light of wavelength .ltoreq.250 nm, esp. .ltoreq.220 nm, and high soly. in solvents and provides high resolu. patterns with good dry etch resistance.

IT 213819-85-3P

RL: PNU (Preparation, unclassified); TEM (Technical or engineered material use); **PREP (Preparation)**; USES (Uses)

(pos.-working photosensitive compn. contg. acid generator and polymer having adamantyl group)

RN 213819-85-3 CAPLUS

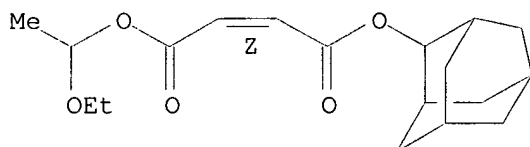
CN 2-Butenedioic acid (2Z)-, 1-ethoxyethyl tricyclo[3.3.1.1<sup>3,7</sup>]dec-2-yl ester, homopolymer (9CI) (CA INDEX NAME)

CM 1

CRN 213819-84-2

CMF C18 H26 O5

Double bond geometry as shown.



IC ICM G03F007-039

ICS G03F007-039; H01L021-027

CC 74-5 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)

Section cross-reference(s): 38

ST adamantyl maleate acrylic copolymer photoresist; itaconate adamantyl group copolymer photoresist; pos working photoresist acid generator

IT Positive photoresists

(pos.-working photosensitive compn. contg. acid generator and polymer having adamantyl group)

IT 213819-81-9P 213819-83-1P **213819-85-3P** 213819-88-6P

213819-90-0P 213819-94-4P 213819-96-6P 213819-97-7P 213819-99-9P

213820-01-0P 213820-04-3P 213820-06-5P 213820-09-8P 213820-12-3P

213820-15-6P 213820-18-9P 213820-20-3P 213820-22-5P 213820-24-7P

213820-26-9P 213820-28-1P 213820-31-6P

RL: PNU (Preparation, unclassified); TEM (Technical or engineered material use); **PREP (Preparation)**; USES (Uses)

(pos.-working photosensitive compn. contg. acid generator and polymer having adamantyl group)

IT 66003-78-9, Triphenylsulfonium triflate

RL: TEM (Technical or engineered material use); USES (Uses)

(pos.-working photosensitive compn. contg. acid generator and polymer having adamantyl group)

IT 51920-52-6P 52858-59-0P, Tetrahydropyranyl methacrylate 57277-38-0P

173947-55-2P 212580-26-2P 212580-28-4P 212580-44-4P 213819-82-0P

213819-92-2P 213820-13-4P 213820-32-7P

RL: PNU (Preparation, unclassified); RCT (Reactant); **PREP (Preparation)**;

RACT (Reactant or reagent)

(prepn. and polymn. of)

IT 770-71-8, 1-Adamantanemethanol

RL: RCT (Reactant); RACT (Reactant or reagent)

(prepn. of adamantanemethyl maleate)  
 IT 109-92-2 2170-03-8, Itaconic anhydride  
 RL: RCT (Reactant); RACT (Reactant or reagent)  
 (prepn. of adamantyl itaconate deriv.)  
 IT 108-31-6, 2,5-Furandione, reactions 768-95-6, 1-Adamantanol  
 RL: RCT (Reactant); RACT (Reactant or reagent)  
 (prepn. of adamantyl maleate)  
 IT 702-98-7, 2-Methyl-2-adamantanol 768-94-5, 1-Aminoadamantane  
 25512-65-6, Dihydropyran  
 RL: RCT (Reactant); RACT (Reactant or reagent)  
 (prepn. of adamantyl maleate deriv.)  
 IT 79-41-4, reactions 760-93-0, Methacrylic anhydride 2568-33-4,  
 3-Hydroxy-3-methyl-butanol 3970-21-6, 2-Methoxyethoxymethyl chloride  
 RL: RCT (Reactant); RACT (Reactant or reagent)  
 (prepn. of alkyl acrylate deriv.)

L40 ANSWER 25 OF 42 CAPLUS COPYRIGHT 2003 ACS

ACCESSION NUMBER: 1998:430076 CAPLUS

DOCUMENT NUMBER: .129:123286

TITLE: Enol-ether-capped

polyether-polysiloxanes for **surfactants** for  
production of polyurethane foams

INVENTOR(S): Miller, Glenn A.

PATENT ASSIGNEE(S): OSI Specialties, Inc., USA

SOURCE: U.S., 8 pp.

CODEN: USXXAM

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 2

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 5773484	A	19980630	US 1996-772856	19961220
US 37711	E	20020521	US 1999-370124	19990802
PRIORITY APPLN. INFO.:			US 1995-9082P	P 19951222
			US 1996-772856	A5 19961220

AB Polyurethane foams are manufd. by mixing a polyethyl polyol, an org. diisocyanate, .gtoreq.1 catalyst, a blowing agent and a polyether-polysiloxane surfactant of the av. formula: M'DxD'yTzM' [I; M' = Me3SiO1/2 or RMeSiO1/2; D = Me2SiO2/2; D' = MeRSiO2/2; T = MeSiO3/2; R = C1-18 alkyl, C.ltoreq.18 aryl, C.ltoreq.18 aralkyl, or BO(C2H4O)a(C3H6O)bR''; B = C2-4 alkylene; R'' = H, C1-18 alkyl, C(O)R''', CO2R''', or C(O)NHR''', or enol-ether capping moieties derived from R'''2C:CR'''OR''', or cyclic (CR'''2)rZs(CR'''2)r'CR''':CR'''O; Z = O, S, or SiR'''2; R''' = H, C.ltoreq.8 alkyl, C.ltoreq.8 aralkyl, or C.ltoreq.8 alkyl; x = 20-220; y = 5-134; z < 4; a, b .gtoreq. 0 (provided the mol. wt. is .gtoreq.300); r = 1-5; s, r' = 0 or 1; with provisos that .gtoreq.1 R = BO(C2H4O)a(C3H6O)bR''; .gtoreq.1 C3H6O group may be replaced with a higher alkylene oxide moiety; and .gtoreq.1 pendent polyether must be capped with the enol-ether group]. These enol **ether capped surfactants** exhibit a high capping efficiency and yield good performance. Moreover, they are stable in water/amine premixes. A typical capped polyether-polysiloxane was manufd. by stirring a mixt. contg. M'D72D'5.5M' (M' and D = same as in I, D' = MeHSiO2/2) 13.8, 2,3-dihydro-4H-pyran (II)-capped, allyl alc. (III)-initiated 60:40 **propylene oxide-ethylene oxide** copolymer (IV, mol. wt. 4000) 16.2, II-capped, III-initiated IV (mol. wt. 1500) 20.0, and PhMe 21.4 parts 40 min at 80-85.degree. in the presence of



an EtOH soln. of hexachloroplatinic acid.

IC ICM C08J009-02

NCL 521174000

CC 37-6 (Plastics Manufacture and Processing)

Section cross-reference(s): **46**

ST polyether polysiloxane surfactant polyurethane foam manuf; enol  
**ether capped** polyether polysiloxane **surfactant**  
 ; propenol initiated **polyoxyalkylene** polysiloxane surfactant  
 manuf; dihydropyran capped **polyoxyalkylene** polysiloxane  
 surfactant manuf

IT **Surfactants**  
 (enol-**ether-capped** graft polyether-polysiloxanes  
 for **surfactants** for prodn. of polyurethane foams)

IT Polyurethanes, preparation  
 RL: IMF (Industrial manufacture); POF (Polymer in formulation); PREP  
 (Preparation); USES (Uses)  
 (enol-**ether-capped** graft polyether-polysiloxanes  
 for **surfactants** for prodn. of polyurethane foams)

IT Polysiloxanes, preparation  
 Polysiloxanes, preparation  
 RL: IMF (Industrial manufacture); MOA (Modifier or additive use); PREP  
 (Preparation); USES (Uses)  
 (**polyoxyalkylene-**, graft; enol-**ether-capped**  
 graft polyether-polysiloxanes for **surfactants** for prodn. of  
 polyurethane foams)

IT **Polyoxyalkylenes**, preparation  
**Polyoxyalkylenes**, preparation  
 RL: IMF (Industrial manufacture); MOA (Modifier or additive use); PREP  
 (Preparation); USES (Uses)  
 (polysiloxane-, graft; enol-**ether-capped** graft  
 polyether-polysiloxanes for **surfactants** for prodn. of  
 polyurethane foams)

IT 210307-82-7DP, trimethylsilyl-terminated 210307-85-0DP,  
 trimethylsilyl-terminated  
 RL: IMF (Industrial manufacture); MOA (Modifier or additive use); PREP  
 (Preparation); USES (Uses)  
 (enol-**ether-capped** graft polyether-polysiloxanes  
 for **surfactants** for prodn. of polyurethane foams)

IT 57516-88-8P  
 RL: IMF (Industrial manufacture); POF (Polymer in formulation); PREP  
 (Preparation); USES (Uses)  
 (enol-**ether-capped** graft polyether-polysiloxanes  
 for **surfactants** for prodn. of polyurethane foams)

IT 210307-83-8P, **Ethylene oxide-propylene**  
**oxide** copolymer allyl tetrahydropyranyl **ether**  
 210307-84-9P, **Ethylene oxide-propylene**  
**oxide** copolymer allyl **ethoxyethyl ether**  
 RL: IMF (Industrial manufacture); RCT (Reactant); PREP (Preparation); RACT  
 (Reactant or reagent)  
 (**surfactant** precursor; enol-**ether-capped**  
 graft polyether-polysiloxanes for **surfactants** for prodn. of  
 polyurethane foams)

REFERENCE COUNT: 4 THERE ARE 4 CITED REFERENCES AVAILABLE FOR THIS  
 RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L40 ANSWER 26 OF 42 CAPLUS COPYRIGHT 2003 ACS

ACCESSION NUMBER: 1998:371855 CAPLUS

DOCUMENT NUMBER: 129:96870

TITLE: Low-foaming surfactants in synergistic ternary blends

AUTHOR(S): Mueller, Felix; Peggau, Joerg  
CORPORATE SOURCE: Th. Goldschmidt AG, Essen, D-45127, Germany  
SOURCE: Comunicaciones presentadas a las Jornadas del Comité  
Espanol de la Detergencia (1998), 28, 127-136  
CODEN: CJCDD7; ISSN: 0212-7466  
PUBLISHER: Comité Espanol de la Detergencia, Tensioactivos y  
Afines  
DOCUMENT TYPE: Journal  
LANGUAGE: English  
AB Synergistic blending of low-foaming surfactants was used to enhance  
surface activity and improve detergency. The surfactants are  
capryl/capramidopropyl betaine [Tegotens B-810], dimethyldecamine oxide  
[Tegotens DO], and butylene oxide capped fatty alc. ethoxylate [Tegotens  
EC11] all from Goldschmidt AG.  
CC 46-5 (Surface Active Agents and **Detergents**)  
ST surfactant blend low foaming detergency improvement  
IT Betaines  
RL: TEM (Technical or engineered material use); USES (Uses)  
(capryl/capramidopropyl; low-foaming surfactants in synergistic ternary  
blends to enhance detergency)  
IT Alcohols, uses  
Alcohols, uses  
RL: TEM (Technical or engineered material use); USES (Uses)  
(fatty, ethoxylated; low-foaming surfactants in synergistic ternary  
blends to enhance detergency)  
IT Contact angle  
Detergency  
Surface activity  
Surface tension  
Surfactants  
(low-foaming surfactants in synergistic ternary blends to enhance  
detergency)  
IT 2605-79-0, Dimethyldecylamine oxide  
RL: TEM (Technical or engineered material use); USES (Uses)  
(Tegotens DO; low-foaming surfactants in synergistic ternary blends to  
enhance detergency)  
IT 26183-52-8D, **Polyethylene** glycol decyl **ether**, butylene  
**oxide-capped** 60270-34-0, Capryl betaine 96565-37-6  
209679-48-1, Tegotens B 810 209679-69-6, Tegotens EC 11  
RL: TEM (Technical or engineered material use); USES (Uses)  
(low-foaming **surfactants** in synergistic ternary blends to  
enhance detergency)  
REFERENCE COUNT: 6 THERE ARE 6 CITED REFERENCES AVAILABLE FOR THIS  
RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L40 ANSWER 27 OF 42 CAPLUS COPYRIGHT 2003 ACS  
ACCESSION NUMBER: 1998:250709 CAPLUS  
DOCUMENT NUMBER: 128:271745  
TITLE: Aqueous stable dispersions of epoxy resins, their  
preparation, and coating use  
INVENTOR(S): Stark, Charles John  
PATENT ASSIGNEE(S): Shell Oil Co., USA  
SOURCE: U.S., 10 pp., Cont. of U.S. Ser. No. 551,205,  
abandoned.  
CODEN: USXXAM  
DOCUMENT TYPE: Patent  
LANGUAGE: English  
FAMILY ACC. NUM. COUNT: 1  
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 5741835	A	19980421	US 1997-896118	19970717
PRIORITY APPLN. INFO.:			US 1995-551205	19951031

GI

\* STRUCTURE DIAGRAM TOO LARGE FOR DISPLAY - AVAILABLE VIA OFFLINE PRINT \*

AB A surfactant stabilized aq. emulsion of epoxy resins includes (a) water; (b) .gtoreq.1 epoxy resin having a functionality .gtoreq.1.0 epoxide group/mol.; (c) 1-20% epoxy-functional polyether surfactant I-V [R1 = C1-15 alkyl, aryl or alkylaryl group, R2 = a divalent aliph. group, a divalent cycloaliph. group, a divalent aryl group, or a divalent arylaliph. group, R3 = H or a C1-10 alkyl group, R8 = divalent aliph. group optionally contg. **ether** or ester group(s) or together with R9 or R10 form a spiro ring optionally contg. heteroatoms, and R9, R10 = H or R9 or R10 together with R8 form a spiro ring optionally contg. heteroatoms such as O, r = .apprx.0-6, X and Y = H, Me or Et group with the provision that if X = Me or Et, Y = H or if Y = Me or Et, X = H and n+m = .apprx.15-450 and n = a real no.].

IT 199237-36-0P

RL: IMF (Industrial manufacture); MOA (Modifier or additive use); PREP (Preparation); USES (Uses)

(surfactant; epoxy-functional polyether surfactant for aq. stable dispersions of epoxy resins)

RN 199237-36-0 CAPLUS

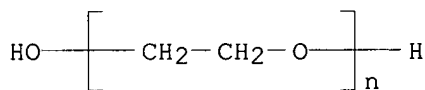
CN Phenol, 4,4'-(1-methylethylidene)bis-, polymer with (chloromethyl)oxirane and .alpha.-hydro-.omega.-hydroxypoly(oxy-1,2-ethanediyl), block (9CI) (CA INDEX NAME)

CM 1

CRN 25322-68-3

CMF (C2 H4 O)n H2 O

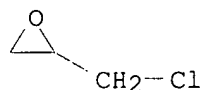
CCI PMS



CM 2

CRN 106-89-8

CMF C3 H5 Cl O

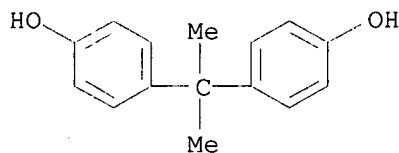


KOROMA EIC1700

CM 3

CRN 80-05-7

CMF C15 H16 O2



IC ICM C08K003-20

ICS C08L063-00

NCL 523403000

CC 42-5 (Coatings, Inks, and Related Products)

Section cross-reference(s): **46**

ST epoxy resin dispersion epoxy functional surfactant; polyoxyalkylene epoxy surfactant prep; coating stable aq epoxy resin dispersion; polyether epoxy surfactant prep

IT Polyethers, uses

Polyethers, uses

Polyoxyalkylenes, uses

Polyoxyalkylenes, uses

RL: IMF (Industrial manufacture); MOA (Modifier or additive use); PREP (Preparation); USES (Uses)

(epoxy, block; epoxy-functional polyether surfactant for aq. stable dispersions of epoxy resins)

IT Emulsifying agents

(epoxy-functional polyether surfactant for aq. stable dispersions of epoxy resins)

IT Epoxy resins, uses

RL: PEP (Physical, engineering or chemical process); PRP (Properties); TEM (Technical or engineered material use); PROC (Process); USES (Uses)

(epoxy-functional polyether surfactant for aq. stable dispersions of epoxy resins)

IT Surfactants

(nonionic; epoxy-functional polyether surfactant for aq. stable dispersions of epoxy resins)

IT Epoxy resins, uses

Epoxy resins, uses

RL: IMF (Industrial manufacture); MOA (Modifier or additive use); PREP (Preparation); USES (Uses)

(polyether-, block; epoxy-functional polyether surfactant for aq. stable dispersions of epoxy resins)

IT Epoxy resins, uses

Epoxy resins, uses

RL: IMF (Industrial manufacture); MOA (Modifier or additive use); PREP (Preparation); USES (Uses)

(polyoxyalkylene-, block; epoxy-functional polyether surfactant for aq. stable dispersions of epoxy resins)

IT Polyoxyalkylenes, preparation

RL: IMF (Industrial manufacture); RCT (Reactant); PREP (Preparation); RACT (Reactant or reagent)

(surfactant starting material; epoxy-functional polyether surfactant for aq. stable dispersions of epoxy resins)

IT Coating materials

(water-thinned; epoxy-functional polyether surfactant for aq. stable

KOROMA EIC1700

dispersions of epoxy resins)  
 IT 39927-08-7P  
 RL: IMF (Industrial manufacture); RCT (Reactant); PREP (Preparation); RACT (Reactant or reagent)  
 (epoxy-functional polyether surfactant for aq. stable dispersions of epoxy resins)  
 IT 25068-38-6  
 RL: PEP (Physical, engineering or chemical process); PRP (Properties); TEM (Technical or engineered material use); PROC (Process); USES (Uses)  
 (epoxy-functional polyether surfactant for aq. stable dispersions of epoxy resins)  
 IT 9004-74-4, Poly(ethylene glycol) monomethyl **ether**  
 RL: RCT (Reactant); RACT (Reactant or reagent)  
 (surfactant starting material; epoxy-functional polyether surfactant for aq. stable dispersions of epoxy resins)  
 IT 180268-10-4P 180741-24-6P 188055-03-0P **199237-36-0P**  
 RL: IMF (Industrial manufacture); MOA (Modifier or additive use); PREP (Preparation); USES (Uses)  
 (surfactant; epoxy-functional polyether surfactant for aq. stable dispersions of epoxy resins)

L40 ANSWER 28 OF 42 CAPLUS COPYRIGHT 2003 ACS

ACCESSION NUMBER: 1997:506303 CAPLUS

DOCUMENT NUMBER: 127:136783

TITLE: Enol-**ether capped** polyethers as **surfactants** for polyurethane manufacturing

INVENTOR(S): Miller, Glenn A.

PATENT ASSIGNEE(S): Miller, Glenn A., USA

SOURCE: PCT Int. Appl., 31 pp.

CODEN: PIXXD2

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 2

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 9723553	A1	19970703	WO 1996-US20411	19961220
W: CA, CN, JP, KR, RU				
RW: AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE				
CA 2212814	AA	19970703	CA 1996-2212814	19961220
EP 811032	A1	19971210	EP 1996-944930	19961220
R: DE, ES, FR, GB, NL				
CN 1181769	A	19980513	CN 1996-193342	19961220
JP 11501977	T2	19990216	JP 1996-523827	19961220
PRIORITY APPLN. INFO.:		US 1995-9082P	P	19951222
		WO 1996-US20411	W	19961220

AB The title enol-ether (e.g., 2,3-dihydro-4H-pyran) capped polyether-polysiloxane copolymers are used as surfactants in polyurethane foam applications and exhibit a high capping efficiency and yield good performance and are stable in water/amine premixes.

IC ICM C08J009-08

ICS C08G018-04

CC 38-3 (Plastics Fabrication and Uses)

Section cross-reference(s): **46**

ST polyether polysiloxane surfactant polyurethane prepn; hydropyran capped polyether polysiloxane surfactant

IT **Surfactants**

(enol-**ether capped** polyethers as

- surfactants** for polyurethane manufg.)
- IT Polysiloxanes, uses  
Polysiloxanes, uses  
RL: TEM (Technical or engineered material use); USES (Uses)  
(**polyoxyalkylene-**, **enol-ether capped**,  
**surfactants**; **enol-ether capped** polyethers  
as **surfactants** for polyurethane manufg.)
- IT **Polyoxyalkylenes**, uses  
**Polyoxyalkylenes**, uses  
RL: TEM (Technical or engineered material use); USES (Uses)  
(**polysiloxane-**, **enol-ether capped**,  
**surfactants**; **enol-ether capped** polyethers  
as **surfactants** for polyurethane manufg.)
- IT Polyurethanes, properties  
RL: IMF (Industrial manufacture); PRP (Properties); PREP (Preparation)  
(**surfactants** for manufg. of; **enol-ether**  
**capped** polyethers as **surfactants** for polyurethane  
manufg.)
- IT 9003-11-6D, **Ethylene oxide-propylene**  
**oxide** copolymer, polymer with polysiloxanes  
RL: TEM (Technical or engineered material use); USES (Uses)  
(**enol-ether capped** polyethers as  
**surfactants** for polyurethane manufg.)
- IT 110-87-2, 2,3-Dihydro-4H-pyran  
RL: PEP (Physical, engineering or chemical process); TEM (Technical or  
engineered material use); PROC (Process); USES (Uses)  
(polyether-polysiloxane **capped** with; **enol-ether**  
**capped** polyethers as **surfactants** for polyurethane  
manufg.)

L40 ANSWER 29 OF 42 CAPLUS COPYRIGHT 2003 ACS

ACCESSION NUMBER: 1996:630194 CAPLUS

DOCUMENT NUMBER: 125:250312

TITLE: Anionic surfactants of the polyether sulfonate type  
and their productionINVENTOR(S): Dulgheru, Alexandra Mihaela; Dinca, Viorica Mioara;  
Ioanovici Mihailescu, Mihai Nicolae Horia

PATENT ASSIGNEE(S): Intreprinderea Chimica "Dudesti", Bucuresti, Rom.

SOURCE: Rom., 4 pp.  
CODEN: RUXXA3

DOCUMENT TYPE: Patent

LANGUAGE: Romanian

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

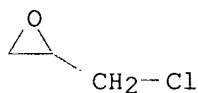
PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
RO 104189	B1	19940627	RO 1989-138640	19890311
PRIORITY APPLN. INFO.:			RO 1989-138640	19890311
AB RO(CH <sub>2</sub> CH <sub>2</sub> O) <sub>n</sub> OCH <sub>2</sub> CH(OH)CH <sub>2</sub> SO <sub>3</sub> X (I, R = R <sub>6-8</sub> or C <sub>12-14</sub> alkyl or nonylphenyl, X = alkali metal or NH <sub>4</sub> , n = 0-8) with good stability in basic media at elevated temps., useful for wetting agents in treatment of textiles, are manufd. by reaction of RO(CH <sub>2</sub> CH <sub>2</sub> O) <sub>n</sub> H (II, R and n = same as in I) with epichlorohydrin (III) in the presence of H <sub>2</sub> SO <sub>4</sub> at 100-140.degree. and II-III mol ratio 1:(1.5-2) and sulfonation of the intermediate with 20-30% aq. Na <sub>2</sub> SO <sub>3</sub> at 155-200.degree. and intermediate-95% Na <sub>2</sub> SO <sub>3</sub> mol ratio 1:(1.3-2).				
IT 106-89-8DP, Epichlorohydrin, reaction products with polyethylene glycol C <sub>12-14</sub> alkyl <b>ethers</b> and sodium sulfite				

KOROMA EIC1700

**25322-68-3DP**, Polyethylene glycol, C12-14 alkyl **ethers**,  
reaction products with epichlorohydrin and sodium sulfite  
RL: IMF (Industrial manufacture); PREP (Preparation)  
(anionic surfactants of the polyether sulfonate type for wetting agents  
for treatment of textiles in basic media)

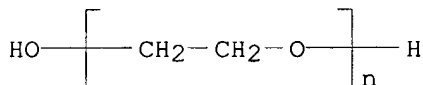
RN 106-89-8 CAPLUS

CN Oxirane, (chloromethyl)- (9CI) (CA INDEX NAME)



RN 25322-68-3 CAPLUS

CN Poly(oxy-1,2-ethanediyl), .alpha.-hydro-.omega.-hydroxy- (9CI) (CA INDEX NAME)



IC ICM C08F002-30

ICS C07C143-16

CC 40-9 (Textiles and Fibers)

Section cross-reference(s): **46**

ST polyoxyethylene hydroxypropyl **ether** sulfonate manuf surfactant;  
alkali resistant polyoxyethylene sulfonate surfactant; epichlorohydrin  
polyoxyethylene **ether** reaction; wetting agent textile treatment  
polyoxyethylene sulfonate

IT Textiles

Wetting agents

(anionic surfactants of the polyether sulfonate type for wetting agents  
for treatment of textiles in basic media)

IT Synthetic fibers, polymeric

RL: MSC (Miscellaneous)

(anionic surfactants of the polyether sulfonate type for wetting agents  
for treatment of textiles in basic media)

IT Alcohols, preparation

RL: IMF (Industrial manufacture); PREP (Preparation)

(C12-14, ethoxylated, reaction products, with epichlorohydrin and  
sodium sulfite; anionic surfactants of the polyether sulfonate type for  
wetting agents for treatment of textiles in basic media)

IT **106-89-8DP**, Epichlorohydrin, reaction products with polyethylene  
glycol C12-14 alkyl **ethers** and sodium sulfite

**25322-68-3DP**, Polyethylene glycol, C12-14 alkyl **ethers**,  
reaction products with epichlorohydrin and sodium sulfite 58965-18-7P  
75413-77-3P

RL: IMF (Industrial manufacture); PREP (Preparation)

(anionic surfactants of the polyether sulfonate type for wetting agents  
for treatment of textiles in basic media)

IT 104-76-7, 2-Ethylhexyl alcohol 106-89-8, Epichlorohydrin, reactions  
7757-83-7, Sodium sulfite

RL: RCT (Reactant); RACT (Reactant or reagent)

(surfactant precursor; anionic surfactants of the polyether sulfonate  
type for wetting agents for treatment of textiles in basic media)

L40 ANSWER 30 OF 42 CAPLUS COPYRIGHT 2003 ACS

ACCESSION NUMBER: 1996:342137 CAPLUS

DOCUMENT NUMBER: 125:34644

TITLE: Interaction of Hydrophobically End-Capped Poly(**ethylene oxide**) with Nonionic Surfactants in Aqueous Solution. Fluorescence and Light Scattering Studies

AUTHOR(S): Alami, E.; Almgren, M.; Brown, W.

CORPORATE SOURCE: Department of Physical Chemistry, University of Uppsala, Uppsala, S-751 21, Swed.

SOURCE: Macromolecules (1996), 29(14), 5026-5035

CODEN: MAMOBX; ISSN: 0024-9297

PUBLISHER: American Chemical Society

DOCUMENT TYPE: Journal

LANGUAGE: English

AB In ternary mixts. of an associative polymer (AP), hydrophobically end-capped poly(**ethylene oxide**), C12EO460C12, and the nonionic surfactant, C12E8, hydrophobic microdomains are formed at much lower concns. than the cac and cmc of the binary systems. Strong interactions promote formation of large networks and result in a substantial depression of the cloud point temp., CPT, (below that of the polymer and the surfactant), a decrease in the diffusion coeff., and an increase in the soln. viscosity. A more hydrophobic surfactant is more effective in forming these structures. At higher relative surfactant concns., however, the networks dissolve and the CPT increases. A second more hydrophobic AP added to a C12EO460C12 soln. does not change the soln. structure in the same way. In mixts. of 2 APs, the CPT is between those of the 2 polymers. The networks formed in this case are always smaller than those formed by either of the APs. Addn. of an AP to a C12E8 soln. slightly increases the total aggregation no. of the hydrophobic domains above that of the pure surfactant aggregates. At concns. where the surfactant structure dominates, the added polymer assocd. with the existing domains rather than forming new ones. The bulky hydrophobic groups of the AP in the ternary mixt. effectively prevent the increase in Nagg with temp. obsd. in pure C12E8 systems and also in the presence of unmodified PEO.

CC 36-7 (Physical Properties of Synthetic High Polymers)

Section cross-reference(s): 46

ST endcapped **polyoxyethylene** interaction nonionic surfactant

IT Micelles

(crit. concn.; interaction of hydrophobically end-capped poly(**ethylene oxide**) with nonionic surfactants in aq. soln. in relation to fluorescence and light scattering)

IT Surfactants

(nonionic, interaction of hydrophobically end-capped poly(**ethylene oxide**) with nonionic surfactants in aq. soln. in relation to fluorescence and light scattering)

IT 57208-34-1, Poly(ethylene glycol didodecyl **ether**)

RL: PEP (Physical, engineering or chemical process); PRP (Properties); PROC (Process)

(interaction of hydrophobically end-capped poly(**ethylene oxide**) with nonionic **surfactants** in aq. soln. in relation to fluorescence and light scattering)

IT 9002-92-0, Polyethylene glycol monododecyl ether

RL: PEP (Physical, engineering or chemical process); PRP (Properties); PROC (Process)

(oligomeric, surfactant; interaction of hydrophobically end-capped poly(**ethylene oxide**) with nonionic surfactants in aq. soln. in relation to fluorescence and light scattering)



L40 ANSWER 31 OF 42 CAPLUS COPYRIGHT 2003 ACS

ACCESSION NUMBER: 1996:163962 CAPLUS

DOCUMENT NUMBER: 124:205643

TITLE: A surfactant composition containing an acetal or ketal adduct

INVENTOR(S): Felix, Mark S.

PATENT ASSIGNEE(S): Dow Chemical Co., USA

SOURCE: PCT Int. Appl., 20 pp.

CODEN: PIXXD2

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

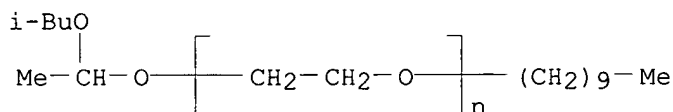
PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 9600253	A1	19960104	WO 1995-US7886	19950621
W: AU, BR, CA, CN, FI, JP, KR, NO				
RW: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE				
AU 9528695	A1	19960119	AU 1995-28695	19950621
PRIORITY APPLN. INFO.:			US 1994-264381	19940623
			WO 1995-US7886	19950621

AB Biodegradable surfactant compns. contain 1-99% acetal or ketal adducts of a monohydroxy-terminated polyoxyalkylene and exhibit crit. micelle concn. <25 ppm. These compns. find value as components in cleaning methods, methods of controlling foam formation, drilling muds, and in formulations for use in cosmetics, pharmaceuticals, and pesticides. Thus, reaction of 124.3 parts polyethoxylated C10 alc. (I, d.p. 7) with 27 parts iso-Bu vinyl ether/mol equiv 2 h at 105.degree./10 mbar in the presence of an acidic ion exchanger as catalyst gave a compn. contg. 4 parts I and 96 parts I acetal mixt. with crit. micelle concn. 7.5 ppm.

IT **174460-49-2P**  
 RL: **IMF (Industrial manufacture)**; TEM (Technical or engineered material use); **PREP (Preparation)**; USES (Uses)  
 (biodegradable surfactants contg. acetals or ketals of monohydroxy-terminated polyoxyalkylenes)

RN 174460-49-2 CAPLUS

CN Poly(oxy-1,2-ethanediyl), .alpha.-decyl-.omega.-[1-(2-methylpropoxy)ethoxy]- (9CI) (CA INDEX NAME)



IC ICM C08G065-32

ICS C08L071-02; C11D001-825; C11D001-72

CC 46-3 (Surface Active Agents and **Detergents**)

Section cross-reference(s): 5, 51, 62, 63

ST biodegradable polyoxyalkylene acetal deriv surfactant; pesticide biodegradable surfactant; pharmaceutical biodegradable surfactant; cosmetics biodegradable surfactant; drilling mud biodegradable surfactant; antifoaming agent biodegradable surfactant; cleaning compn biodegradable surfactant; isobutoxyethylene adduct polyoxyethylene decyl ether surfactant; ketal polyoxyalkylene deriv surfactant biodegradable

IT Polyoxyalkylenes, uses

KOROMA EIC1700

- RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)  
 (acetal and ketal derivs.; biodegradable surfactants contg. acetals or ketals of monohydroxy-terminated polyoxyalkylenes)
- IT Surfactants  
 (biodegradable surfactants contg. acetals or ketals of monohydroxy-terminated polyoxyalkylenes)
- IT Antifoaming agents  
 (biodegradable surfactants contg. acetals or ketals of monohydroxy-terminated polyoxyalkylenes for antifoaming agents in food industry)
- IT Dispersing agents  
 (biodegradable surfactants contg. acetals or ketals of monohydroxy-terminated polyoxyalkylenes for dispersants for oil spills)
- IT Drilling fluids and muds  
 (biodegradable surfactants contg. acetals or ketals of monohydroxy-terminated polyoxyalkylenes for drilling muds)
- IT Bactericides, Disinfectants, and Antiseptics  
 Biodegradable materials  
 (biodegradable surfactants contg. acetals or ketals of monohydroxy-terminated polyoxyalkylenes for use in bactericide compns.)
- IT Cosmetics  
 (biodegradable surfactants contg. acetals or ketals of monohydroxy-terminated polyoxyalkylenes for use in cosmetics)
- IT Fungicides and Fungistats  
 (biodegradable surfactants contg. acetals or ketals of monohydroxy-terminated polyoxyalkylenes for use in fungicide compns.)
- IT Herbicides  
 (biodegradable surfactants contg. acetals or ketals of monohydroxy-terminated polyoxyalkylenes for use in herbicide compns.)
- IT Insecticides  
 (biodegradable surfactants contg. acetals or ketals of monohydroxy-terminated polyoxyalkylenes for use in insecticide compns.)
- IT Lubricants  
 (biodegradable surfactants contg. acetals or ketals of monohydroxy-terminated polyoxyalkylenes for use in lubricants)
- IT Mercerization  
 (biodegradable surfactants contg. acetals or ketals of monohydroxy-terminated polyoxyalkylenes for use in mercerization of textiles)
- IT Pharmaceuticals  
 (biodegradable surfactants contg. acetals or ketals of monohydroxy-terminated polyoxyalkylenes for use in pharmaceutical compns.)
- IT Acetals  
 RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)  
 (polyoxyalkylene derivs.; biodegradable surfactants contg. acetals or ketals of monohydroxy-terminated polyoxyalkylenes)
- IT Milk  
 (powd., aq. dispersions; biodegradable surfactants contg. acetals or ketals of monohydroxy-terminated polyoxyalkylenes for antifoaming agents in food industry)
- IT Detergents  
 (cleaning compns., biodegradable surfactants contg. acetals or ketals of monohydroxy-terminated polyoxyalkylenes for cleaning)
- IT Alcohols, uses  
 RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)

(fatty, alkoxyated, acetal and ketal derivs.; biodegradable surfactants contg. acetals or ketals of monohydroxy-terminated polyoxyalkylenes)

IT Acetals  
RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)  
(ketals, polyoxyalkylene derivs.; biodegradable surfactants contg. acetals or ketals of monohydroxy-terminated polyoxyalkylenes)

IT Petroleum  
RL: MSC (Miscellaneous)  
(oil spills, biodegradable surfactants contg. acetals or ketals of monohydroxy-terminated polyoxyalkylenes for dispersants for oil spills)

IT 174460-48-1P 174460-49-2P  
RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)  
(biodegradable surfactants contg. acetals or ketals of monohydroxy-terminated polyoxyalkylenes)

IT 5669-09-0P  
RL: BYP (Byproduct); PREP (Preparation)  
(byproduct; biodegradable surfactants contg. acetals or ketals of monohydroxy-terminated polyoxyalkylenes)

IT 109-53-5  
RL: RCT (Reactant); RACT (Reactant or reagent)  
(precursor; biodegradable surfactants contg. acetals or ketals of monohydroxy-terminated polyoxyalkylenes)

L40 ANSWER 32 OF 42 CAPLUS COPYRIGHT 2003 ACS

ACCESSION NUMBER: 1995:91836 CAPLUS

DOCUMENT NUMBER: 122:90310

TITLE: Influence of surfactant structure on wettability modification of hydrophobic granular surfaces

AUTHOR(S): Varadaraj, Ramesh; Bock, Jan; Brons, Neil; Zushma, Steve

CORPORATE SOURCE: Exxon Res. and Engineering Co., Annandale, NJ, 08801, USA

SOURCE: Journal of Colloid and Interface Science (1994), 167(1), 207-10

CODEN: JCISA5; ISSN: 0021-9797

DOCUMENT TYPE: Journal

LANGUAGE: English

AB The influence of surfactant structure on wettability modification of hydrophobic granular surfaces was examd by using the capillary penetration wetting technique. Linear and branched hydrocarbon chain sulfates (5 monodisperse ethoxylates and 5 monodisperse ethoxysulfates) were used as surfactants and resin-coated sand as the hydrophobic granular surface. Both the surfactant type and hydrocarbon chain branching were obsd. to exert a significant influence on the rate and effectiveness of wetting. Wetting rates decrease in the order ethoxylates > sulfates > ethoxysulfates and wetting effectiveness is sulfates > ethoxylates. For a given surfactant type, hydrocarbon chain branching increases wetting rate and effectiveness.

CC 66-4 (Surface Chemistry and Colloids)  
Section cross-reference(s): 36, 46, 48

ST ethoxylated surfactant capillary penetration hydrophobic surface; wettability granular hydrophobic surface surfactant structure; chain length branching surfactant capillary penetration

IT Chains, chemical  
Wetting agents  
(capillary penetration study of ethoxylated surfactant wettability

- modification of hydrophobic granular surfaces as function of surfactant chain branching and chain length)
- IT Sand  
RL: PEP (Physical, engineering or chemical process); PROC (Process)  
(capillary penetration study of ethoxylated surfactant wettability modification of hydrophobic granular surfaces as function of surfactant chain branching and chain length)
- IT Absorption  
(capillary penetration; capillary penetration study of ethoxylated surfactant wettability modification of hydrophobic granular surfaces as function of surfactant chain branching and chain length)
- IT Phenolic resins, processes  
RL: MOA (Modifier or additive use); PEP (Physical, engineering or chemical process); PROC (Process); USES (Uses)  
(surface layer; capillary penetration study of ethoxylated surfactant wettability modification of hydrophobic granular surfaces as function of surfactant chain branching and chain length)
- IT 151-21-3, SDS, processes 3055-95-6, C12E5 19097-60-0,  
**Pentaoxyethylene** monotridecyl **ether** 67152-16-3  
132000-82-9 160510-45-2, Pentaethylene glycol mono(1-propyldecyl **ether**) 160510-46-3, Pentaethylene glycol mono(1-propylnonyl **ether**) 160510-47-4, Pentaethylene glycol mono(1-hexylheptyl **ether**) 160510-48-5 160510-49-6  
RL: MOA (Modifier or additive use); PEP (Physical, engineering or chemical process); PROC (Process); USES (Uses)  
(**capillary** penetration study of ethoxylated **surfactant** wettability modification of hydrophobic granular surfaces as function of surfactant chain branching and chain length)

L40 ANSWER 33 OF 42 CAPLUS COPYRIGHT 2003 ACS

ACCESSION NUMBER: 1993:126973 CAPLUS

DOCUMENT NUMBER: 118:126973

TITLE: Low foam nonionic surfactants: biodegradability and performance optimization

AUTHOR(S): Karsa, D. R.; Adamson, J.; Hadfield, R. P.

CORPORATE SOURCE: Harcros Chem. U.K. Ltd., Manchester, UK

SOURCE: Chimica Oggi (1992), 10(5), 39-45

CODEN: CHOGDS; ISSN: 0392-839X

DOCUMENT TYPE: Journal

LANGUAGE: English

AB Biodegradability of **ethylene oxide-propylene**

**oxide** copolymer fatty alc. ethers for com. detergents was evaluated by a range of lab. bench test simulations. The effect of endcapping of ethoxylated fatty alcs. using butylene oxide or aryl groups was shown.

CC 46-3 (Surface Active Agents and **Detergents**)

ST nonionic surfactant biodegradability testing; **ethylene propylene oxide** copolymer surfactant

IT Polymer degradation

(biochem., of nonionic surfactants, evaluation of)

IT Alcohols, compounds

RL: TEM (Technical or engineered material use); USES (Uses)

(fatty, ethoxylated, surfactants, biodegradability of)

IT Detergents

Surfactants

(nonionic, biodegradability of, evaluation of)

IT 9003-11-6D, **Ethylene oxide-propylene**

**oxide** copolymer, ethers with fatty alcs. 25322-68-3D, ethers with fatty alcs., butylene oxide- or aryl **ether** end-

**capped** 139323-06-1D, ethers with fatty alcs.  
 RL: TEM (Technical or engineered material use); USES (Uses)  
 (**surfactants**, biodegradability of, evaluation of)

L40 ANSWER 34 OF 42 CAPLUS COPYRIGHT 2003 ACS

ACCESSION NUMBER: 1992:131658 CAPLUS  
 DOCUMENT NUMBER: 116:131658  
 TITLE: Antifoaming additives for detergents for fabrics  
 INVENTOR(S): Kralik, Milan; Niepel, Wiliam; Paulovic, Milan;  
 Zhdamarova, V. N.; Bystritskii, G. I.; Anishchuk, E.  
 N.  
 PATENT ASSIGNEE(S): Czech.  
 SOURCE: Czech., 4 pp.  
 CODEN: CZXXA9  
 DOCUMENT TYPE: Patent  
 LANGUAGE: Slovak  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

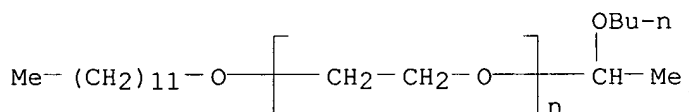
PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
CS 269690	B1	19900411	CS 1988-7460	19881114
PRIORITY APPLN. INFO.:			CS 1988-7460	19881114
OTHER SOURCE(S): MARPAT 116:131658				

AB Detergents with reduced foaming comprise 25-75 wt.% water-sol. product (A) of the addn. reaction of 0.7-0.9 mol CH<sub>2</sub>:CHOR<sub>2</sub> (R<sub>2</sub> = C<sub>3</sub>-6 alkyl) with 1.0 mol R<sub>1</sub>O(CH<sub>2</sub>CH<sub>2</sub>O)<sub>x</sub>H [I, R<sub>1</sub> = C<sub>8</sub>-18 alkyl or C<sub>8</sub>-18-alkylaryl]; x = 8-15], and 25-75 wt.% I (x = 3-6) (II). The mixts. of A and II exhibited better detergency than the individual components.

IT **139210-39-2**  
 RL: USES (Uses)  
 (antifoaming agents, for nonionic detergents for fabrics)

RN 139210-39-2 CAPLUS

CN Poly(oxy-1,2-ethanediyl), .alpha.-(1-butoxyethyl)-.omega.-(dodecyloxy)-(9CI) (CA INDEX NAME)



IC ICM C11D001-72  
 ICA C11D003-075  
 CC 46-5 (Surface Active Agents and **Detergents**)  
 Section cross-reference(s): 40  
 ST vinyl ether polyoxyethylene adduct detergent; alkyl polyoxyethylene detergent antifoam additive; nonionic detergent low foaming textile; fatty alkyl polyoxyethylene detergent textile; alkylphenyl polyoxyethylene detergent textile; alkoxyethylene polyoxyethylene ether adduct detergent  
 IT Antifoaming agents  
 (reaction products for alkyl vinyl ethers and ethoxylated fatty alcs. or ethoxylated alkylphenols as, for nonionic detergents)  
 IT Detergents  
 (nonionic, antifoaming agents for, reaction products for alkyl vinyl ethers and ethoxylated fatty alcs. or ethoxylated alkylphenols as)  
 IT **139210-39-2** 139467-88-2  
 RL: USES (Uses)

KOROMA EIC1700

(antifoaming agents, for nonionic detergents for fabrics)  
 IT 9002-92-0 9016-45-9  
 RL: USES (Uses)  
 (detergents, antifoaming agents for, vinyl alkyl ether-polyethylene glycol ether adducts as, for textiles)

L40 ANSWER 35 OF 42 CAPLUS COPYRIGHT 2003 ACS

ACCESSION NUMBER: 1991:658766 CAPLUS

DOCUMENT NUMBER: 115:258766

TITLE: Stable alkyl and/or aryl silyl **ether capped** polyether **surfactants** for liquid cleaning agents containing hypohalite bleaches  
 INVENTOR(S): Otten, Jay G.; Parker, Edward J.; Kinnaird, Michael Gates

PATENT ASSIGNEE(S): USA

SOURCE: Can. Pat. Appl., 46 pp.

CODEN: CPXXEB

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
CA 2030236	AA	19910521	CA 1990-2030236	19901119
CA 2030236	C	19971021		
US 5073286	A	19911217	US 1989-438312	19891120
PRIORITY APPLN. INFO.:			US 1989-438312	19891120

AB The title surfactants are useful in the prepn. of liq. cleaning compns. having good bleach stability, esp. automatic dishwasher detergents. An **ethylene oxide-propylene oxide** block copolymer (I) was treated with isobutylene oxide and Me<sub>3</sub>CSiMe<sub>2</sub>Cl to give a capped surfactant. An aq. compn. contg. the surfactant and NaOCl showed better retention of active Cl during storage than a compn. contg. uncapped I.

IC C07F007-08; C07H023-00; C11D003-395; C11D001-82

CC 46-6 (Surface Active Agents and **Detergents**)

ST nonionic surfactant capping bleach stability; **polyoxyalkylene** surfactant capping bleach stability; hypochlorite bleach stability nonionic surfactant; silyl capping **polyoxyalkylene** bleach stability

IT Bleaching agents  
 (chlorine, liq. detergents contg. capped polyether surfactants and, stable)

IT Detergents  
 (cleaning compns., liq., capped polyether surfactants for, for chlorine bleach stability)

IT Detergents  
 (dishwashing, liq., capped polyether surfactants for, for chlorine bleach stability)

IT 7782-50-5  
 RL: USES (Uses)  
 (bleaching agents, chlorine, liq. detergents contg. capped polyether surfactants and, stable)

IT 106392-12-5D, **Ethylene oxide-propylene oxide** block copolymer, silyl group-capped  
 RL: USES (Uses)  
 (liq. cleaners contg., with improved chlorine bleach stability)

IT 558-30-5D, Isobutylene oxide, reaction products with polyether surfactants

KOROMA EIC1700

and chlorosilanes 18162-48-6D, tert-Butyldimethylsilyl chloride,  
 reaction products with polyether surfactants  
 RL: TEM (Technical or engineered material use); USES (Uses)  
 (surfactants, liq. cleaners contg., for chlorine bleach stability)

L40 ANSWER 36 OF 42 CAPLUS COPYRIGHT 2003 ACS

ACCESSION NUMBER: 1989:615956 CAPLUS

DOCUMENT NUMBER: 111:215956

TITLE: Adsolubilization behavior of dyes caused by mixed  
 surfactant bilayers formed on alumina

AUTHOR(S): Esumi, Kunio; Sakamoto, Yuichi; Nagahama, Tetsuya;  
 Meguro, Kenjiro

CORPORATE SOURCE: Inst. Colloid Interface Sci., Sci. Univ. Tokyo, Tokyo,  
 162, Japan

SOURCE: Bulletin of the Chemical Society of Japan (1989),  
 62(8), 2502-6

CODEN: BCSJA8; ISSN: 0009-2673

DOCUMENT TYPE: Journal

LANGUAGE: English

AB The adsolubilization of dyes (yellow OB and azobenzene) was performed on  
 mixed bilayers consisting of anionic and nonionic surfactants formed on  
 .alpha.-alumina. The adsolubilization capacity of the two dyes increased  
 with the increase in the concn. of the dyes solubilized in the  
 supernatant. The mixed bilayer consisting of anionic hydrocarbon (Li  
 dodecyl sulfate) and nonionic hydrocarbon **surfactants** (  
**polyoxyethylene** nonylphenyl **ether**) showed a greater  
 adsolubilization **capacity** than that consisting of anionic  
 fluorocarbon (Li perfluorooctanefulfonate) and nonionic hydrocarbon  
 surfactants. Further, the adsolubilization capacity of the dyes was  
 affected by the **oxyethylene** chain length of the nonionic  
 hydrocarbon surfactant in the mixed bilayer.

CC 41-3 (Dyes, Organic Pigments, Fluorescent Brighteners, and Photographic  
 Sensitizers)

Section cross-reference(s): 46

ST azo dye solubilization surfactant bilayer

IT Solubilization

(ad-, of azo dyes on mixed surfactant bilayers formed on alumina)

IT Dyes, azo

(adsolubilization of, on mixed surfactant bilayers formed on alumina)

IT Surfactants

(anionic, mixed surfactant bilayers contg., on alumina, adsolubilization  
 of azo dyes on)

IT Surfactants

(nonionic, mixed surfactant bilayers contg., on alumina,  
 adsolubilization of azo dyes on)

IT 103-33-3, Azobenzene 131-79-3, Yellow OB

RL: USES (Uses)

(adsolubilization of, on mixed surfactant bilayers formed on alumina)

IT 2044-56-6, Lithium dodecyl sulfate 9016-45-9, Polyethylene glycol

nonylphenyl ether 29457-72-5, Lithium perfluorooctanesulfonate

RL: USES (Uses)

(mixed surfactant bilayers contg., on alumina, adsolubilization of azo  
 dyes on)

IT 1344-28-1, Alumina, uses and miscellaneous

RL: USES (Uses)

(mixed surfactant bilayers on, adsolubilization of azo dyes on)

L40 ANSWER 37 OF 42 CAPLUS COPYRIGHT 2003 ACS

ACCESSION NUMBER: 1989:97574 CAPLUS

DOCUMENT NUMBER: 110:97574  
 TITLE: Synthesis and physicochemical properties of  
 surfactants based on asymmetric acetals  
 AUTHOR(S): Zhdamarova, V. N.; Basova, L. V.; Platonova, L. I.;  
 Kokoreva, I. N.; Kalinichenko, A. M.; Bezulenko, V.  
 N.; Niepel, W.  
 CORPORATE SOURCE: NIOPIK, Moscow, USSR  
 SOURCE: Textil a Chemia (1988), 18(1), 44-56  
 CODEN: TCHMDR; ISSN: 0139-7656  
 DOCUMENT TYPE: Journal  
 LANGUAGE: Czech

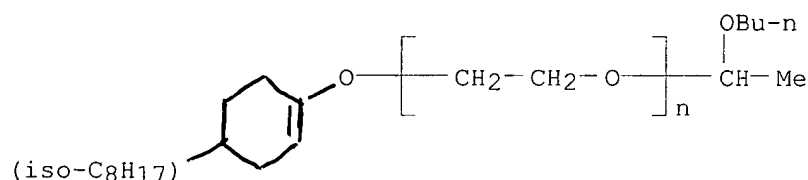
AB Asym. acetals were prep'd. by acetalization of ethoxylated isooctylphenol or ethoxylated C8-18 alcs. with vinyl Bu ether at 35-40.degree. for 2-5 h in the presence of H3PO4, p-toluenesulfonic acid, and BF3.Et2O. The surface tension of the acetals depended on the length of the hydrophobic radical (R) of the alc. and on the ethoxylation degree (n); the highest surface tension showed acetals with R = C12-14 and n = 10-12. The wetting ability of the acetals was similar to that of the initial ethoxylates; the optimum wetting ability with respect to wool and cotton fabrics showed acetals with R = C10-12 and n = 9-10. The acetals showed low crit. concn. of micelles. Blocking of the terminal OH groups of the above ethoxylates due to acetal formation resulted in a sharp decrease of foaming. Mill scale trials showed that the prep'd. acetals can be used as additives in bleaching and dyeing of natural and synthetic fibers.

IT 119131-52-1P

RL: SPN (Synthetic preparation); PREP (Preparation)  
 (prepn. and surface-active properties of)

RN 119131-52-1 CAPLUS

CN Poly(oxy-1,2-ethanediyl), .alpha.-(1-butoxyethyl)-.omega.-(4-  
 isooctylphenoxy)- (9CI) (CA INDEX NAME)



CC 46-3 (Surface Active Agents and **Detergents**)

Section cross-reference(s): 40

ST asym acetal surfactant; ethoxylated alc acetalization; isooctylphenol  
 ethoxylated acetalization; vinyl Bu ether acetalization alc

IT Surfactants

(acetals, asym., from ethoxylated isooctylphenol and ethoxylated fatty  
 alcs.)

IT Acetals

RL: SPN (Synthetic preparation); PREP (Preparation)  
 (asym., prepn. and surface-active properties of)

IT Micelles

(crit. concn. of, of asym. acetals from ethoxylated isooctylphenol and  
 ethoxylated fatty alcs.)

IT Foaming

Hydrolysis

Surface tension

Wettability

(of asym. acetals from ethoxylated isooctylphenol and ethoxylated fatty

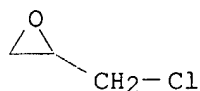


alcs.)  
 IT Acetalization and Ketalization  
 (of ethoxylated isooctylphenol and ethoxylated fatty alcs., with Bu vinyl ether)  
 IT Bleaching  
 Dyeing  
 (of natural and synthetic fibers, asym. acetals from ethoxylated isooctylphenol and ethoxylated fatty alcs. as additives for)  
 IT Alcohols, compounds  
 RL: PROC (Process)  
 (fatty, ethoxylated, acetalization of, with Bu vinyl ether)  
 IT 111-34-2, Butyl vinyl ether  
 RL: USES (Uses)  
 (acetalization by, of ethoxylated isooctylphenol and ethoxylated fatty alcs.)  
 IT 25322-68-3D, ethers with fatty alcs. 51651-58-2  
 RL: PROC (Process)  
 (acetalization of, with Bu vinyl ether)  
 IT 119131-52-1P  
 RL: **SPN (Synthetic preparation); PREP (Preparation)**  
 (prepn. and surface-active properties of)  
 IT 7732-18-5  
 RL: USES (Uses)  
 (wettability, of asym. acetals from ethoxylated isooctylphenol and ethoxylated fatty alcs.)

L40 ANSWER 38 OF 42 CAPLUS COPYRIGHT 2003 ACS  
 ACCESSION NUMBER: 1988:223529 CAPLUS  
 DOCUMENT NUMBER: 108:223529  
 TITLE: Preparation of surface-active quaternary ammonium salts  
 INVENTOR(S): Raif, Zdenek; Vacha, Jaroslav; Bechtold, Ludvik; Krsnak, Frantisek  
 PATENT ASSIGNEE(S): Czech.  
 SOURCE: Czech., 6 pp.  
 CODEN: CZXXA9  
 DOCUMENT TYPE: Patent  
 LANGUAGE: Czech  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

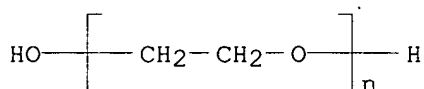
PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
CS 239964	B1	19860116	CS 1984-2212	19840328
PRIORITY APPLN. INFO.:			CS 1984-2212	19840328
OTHER SOURCE(S): MARPAT 108:223529				
AB The title salts are prepd. by the reaction of ethoxylated aliph. alcs. with epichlorohydrin (I) in the presence of HBF <sub>4</sub> and quaternization with an amine. A surfactant was prepd. by treating 400 g ethoxylated (4.5 mol) C <sub>12</sub> -15 alcs. with 105 g I in the presence of 5 g HBF <sub>4</sub> at 110-120.degree. during 1 h, heating 1 h at 110-120.degree., adding 1370 g water, adding 95 g Me <sub>2</sub> NCH <sub>2</sub> CH <sub>2</sub> OH during 30 min at 90.degree., and adding AcOH to give pH 6-7.				
IT 106-89-8DP, Epichlorohydrin, reaction products with ethoxylated alcs., quaternized 25322-68-3DP, Polyethylene glycol, monoalkyl ethers, reaction products with epichlorohydrin, quaternized				
RL: IMF (Industrial manufacture); PREP (Preparation) (prepn. of surface-active)				
RN 106-89-8 CAPLUS				

CN Oxirane, (chloromethyl)- (9CI) (CA INDEX NAME)



RN 25322-68-3 CAPLUS

CN Poly(oxy-1,2-ethanediyl), .alpha.-hydro-.omega.-hydroxy- (9CI) (CA INDEX NAME)



IC ICM C11D001-62

CC 46-3 (Surface Active Agents and **Detergents**)

ST ethoxylate epichlorohydrin quaternization surfactant; ammonium deriv  
epichlorohydrin ethoxylate surfactant; hydroxyethyldimethylamine  
epichlorohydrin ethoxylate surfactant; alc ethoxylate epichlorohydrin  
surfactant

IT Quaternary ammonium compounds, preparation

RL: IMF (Industrial manufacture); PREP (Preparation)  
(prepn. of surface-active, from ethoxylated alc.-epichlorohydrin  
adducts)

IT Surfactants

(quaternized ethoxylated alc.-epichlorohydrin adducts, prepn. of)

IT Alcohols, compounds

RL: USES (Uses)

(C12-15, ethoxylated, reaction products with epichlorohydrin,  
quaternized, surface-active)

IT **106-89-8DP**, Epichlorohydrin, reaction products with ethoxylated  
alcs., quaternized 108-01-ODP, Dimethylethanolamine, quaternization  
products with ethoxylated alc.-epichlorohydrin adducts 24969-10-6DP,  
Epichlorohydrin-ethylene oxide copolymer, monoalkyl **ethers**,  
quaternized **25322-68-3DP**, Polyethylene glycol, monoalkyl  
**ethers**, reaction products with epichlorohydrin, quaternized

RL: IMF (Industrial manufacture); PREP (Preparation)  
(prepn. of surface-active)

L40 ANSWER 39 OF 42 CAPLUS COPYRIGHT 2003 ACS

ACCESSION NUMBER: 1987:69835 CAPLUS

DOCUMENT NUMBER: 106:69835

TITLE: Surfactants as components of acid treatment fluids in  
enhancement of the output of underground gas storage  
wells

AUTHOR(S): Obruca, Miroslav

CORPORATE SOURCE: Czech.

SOURCE: Prace Vyzkumneho Ustavu Geologickeho Inzenyrstvi  
(1986), 38, 71-82  
CODEN: PVUIDX; ISSN: 0139-763X

DOCUMENT TYPE: Journal

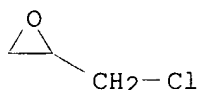
LANGUAGE: Czech

AB The foaming, chem. stability, and surface tension (.sigma.) vs. concn.  
were studied of 6 com. surfactants in an acidizing soln. contg. 32% HCl  
280 mL NH4Cl 30 g, 98% AcOH [64-19-7] 15 mL, citric acid [77-92-9] 5 g,

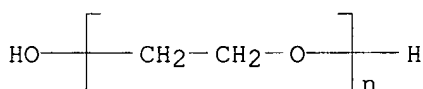
KOROMA EIC1700

and water 705 mL. Pyronil (Na salts of cetyl-oleyl sulfates) at 0.2% concn. lowered .sigma. of A from 34 to 26.5 mN/m and it did not foam. Etaxon EPA [9004-82-4] (Na salts of substituted poly(ethylene glycol) sulfates) had similar, but lower, surfactant activity to Pyronil. Syntamin AE (ethanolamine-neutralized epichlorohydrin-fatty acid condensate) at 0.01% concn. lowered .sigma. of A to 27.2 mN/m and it gave a stable foam. Slovasol O and Slovasol 3520/K (oxyethylated fatty alcs.) were very effective foaming agents. Slovanik M640 (ethylene oxide-propylene oxide copolymer) had low surfactant activity and suppressed foaming of other surfactants. The possibility of these surfactants application for acidizing the limestone natural gas reservoirs is discussed.

IT 106-89-8D, Epichlorohydrin, fatty acid condensates with, ethanolamine salts 25322-68-3D, Poly(ethylene oxide), fatty alc. ethers with  
 RL: USES (Uses)  
 (surfactant properties of, in acidizing solns. for enhanced natural gas recovery)  
 RN 106-89-8 CAPLUS  
 CN Oxirane, (chloromethyl)- (9CI) (CA INDEX NAME)



RN 25322-68-3 CAPLUS  
 CN Poly(oxy-1,2-ethanediyl), .alpha.-hydro-.omega.-hydroxy- (9CI) (CA INDEX NAME)



CC 51-5 (Fossil Fuels, Derivatives, and Related Products)  
 Section cross-reference(s): 46  
 ST acidization natural gas reservoir surfactant  
 IT Natural gas  
 RL: PROC (Process)  
 (recovery of, acidization in, surfactants for)  
 IT Surfactants  
 (selection of, for acidizing solns. in enhanced natural gas recovery)  
 IT 64-19-7, Acetic acid, uses and miscellaneous 77-92-9, Citric acid, uses and miscellaneous 7647-01-0, Hydrochloric acid, uses and miscellaneous 12125-02-9, Ammonium chloride, uses and miscellaneous  
 RL: USES (Uses)  
 (acidizing solns. contg., for enhanced natural gas recovery, surfactants for)  
 IT 106-89-8D, Epichlorohydrin, fatty acid condensates with, ethanolamine salts 141-43-5D, Ethanolamine, salts of epichlorohydrin-fatty acid condensates 1120-01-0, Cetyl sodium sulfate 1847-55-8, Oleyl sodium sulfate 9003-11-6, Ethylene oxide-propylene oxide copolymer 9004-82-4, Etaxon EPA 25322-68-3D, Poly(ethylene oxide), fatty alc. ethers with 34503-11-2 37343-87-6, Slovasol O 106388-60-7 106388-70-9 106388-79-8 106392-12-5

RL: USES (Uses)  
(surfactant properties of, in acidizing solns. for enhanced natural gas recovery)

L40 ANSWER 40 OF 42 CAPLUS COPYRIGHT 2003 ACS

ACCESSION NUMBER: 1986:610823 CAPLUS  
DOCUMENT NUMBER: 105:210823  
TITLE: Capsule-containing surfactant compositions  
INVENTOR(S): Wakui, Tsugio; Matsushita, Takao  
PATENT ASSIGNEE(S): Lion Corp., Japan  
SOURCE: Jpn. Kokai Tokkyo Koho, 5 pp.  
CODEN: JKXXAF  
DOCUMENT TYPE: Patent  
LANGUAGE: Japanese  
FAMILY ACC. NUM. COUNT: 1  
PATENT INFORMATION:

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
	JP 61086933	A2	19860502	JP 1984-207610	19841003
PRIORITY APPLN. INFO.:				JP 1984-207610	19841003
AB	The title compns. (viscosity .ltoreq.1000 cP) with color stability during exposure to light contain capsules contg. surfactants, perfumes, dyes, and 0.01-1% UV absorber, e.g., 4-aminobenzoate ester, 4-methoxycinnamate ester, or benzophenone deriv. Thus, a C12-13 alkyl polyethoxysulfate (Na salt) 15.0, 2- <b>ethoxyethyl</b> 4-methoxycinnamate (I) 0.01, gelatin capsules (contg. 6:4:1 methylphenylsiloxane-liq. paraffin-perfume and 1 ppm Acid Red) 1.0, 30:30:5:35 lemon oil-geranium oil-patchouli oil-.alpha.-hexylcinnamaldehyde 0.5, and water 83.49 parts were mixed to give a compn. which was resistant to discoloration during 1 mo in sunlight while a compn. without I became discolored.				
IC	ICM B01F017-00 ICS A61K007-06				
ICA	D06M013-12; D06M013-20				
CC	46-6 (Surface Active Agents and <b>Detergents</b> )				
ST	light stabilizer capsule surfactant; capsule gelatin light stabilizer; cinnamate light stabilizer surfactant; aminobenzoate light stabilizer surfactant; benzophenone light stabilizer surfactant; perfume surfactant light stabilizer; discoloration prevention surfactant capsule				
IT	Surfactants (compns., capsule-contg., light stabilizers for)				
IT	Light stabilizers (for capsule-contg. surfactant compns.)				
IT	94-09-7	104-28-9	131-56-6	131-57-7	5466-77-3 21245-02-3
	RL: USES (Uses) (light stabilizers, for capsule-contg. surfactant compns.)				
IT	151-21-3, uses and miscellaneous 25322-68-3D, monoalkyl <b>ethers</b> , sulfates 29963-33-5 105305-55-3 RL: USES (Uses) ( <b>surfactant</b> compns. contg. <b>capsules</b> and, light stabilizers for)				

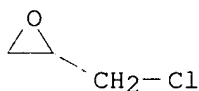
L40 ANSWER 41 OF 42 CAPLUS COPYRIGHT 2003 ACS

ACCESSION NUMBER: 1978:461398 CAPLUS  
DOCUMENT NUMBER: 89:61398  
TITLE: Liquid aqueous cleaning composition  
INVENTOR(S): Ploog, Uwe  
PATENT ASSIGNEE(S): Henkel K.-G.a.A., Fed. Rep. Ger.  
SOURCE: Ger. Offen., 17 pp.

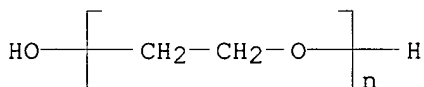
KOROMA EIC1700

DOCUMENT TYPE: CODEN: GWXXBX  
 LANGUAGE: Patent  
 FAMILY ACC. NUM. COUNT: 1 German  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
DE 2654985	A1	19780608	DE 1976-2654985	19761203
PRIORITY APPLN. INFO.:			DE 1976-2654985	19761203
AB	To improve their rinsing properties during the hand washing of dishes and hard surfaces, liq. washing compns. contg. anionic surfactants were mixed with an additive prepd. by the reaction of polyethylene glycol (I), H(OCH <sub>2</sub> CH <sub>2</sub> ) <sub>3</sub> OH, or ethoxylated pentaerythritol monoalkyl <b>ether</b> with epichlorohydrin (II) and NH <sub>3</sub> , an alkylamine, and/or a polyamine. Thus, 180 g I (mol. wt. 600) was treated with 55 g II and 13 g dipropylaminetriamine to prep. a liq., water-sol. additive for liq. detergents.			
IT	106-89-8D, reaction products with polyoxyethylenes and amines 25322-68-3D, reaction products with epichlorohydrin and amines RL: USES (Uses) (liq. detergents contg. anionic surfactants and, for improved rinsing from hard surfaces)			
RN	106-89-8 CAPLUS			
CN	Oxirane, (chloromethyl)- (9CI) (CA INDEX NAME)			



RN 25322-68-3 CAPLUS  
 CN Poly(oxy-1,2-ethanediyl), .alpha.-hydro-.omega.-hydroxy- (9CI) (CA INDEX NAME)



IC C11D003-37  
 CC 46-6 (Surface Active Agents and **Detergents**)  
 ST anionic detergent liq rinsing; rinsing additive liq detergent; polyoxyethylene deriv rinsing detergent; amine deriv rinsing detergent; dishwashing detergent rinsing  
 IT Amines, compounds  
 RL: USES (Uses)  
 (reaction products with epichlorohydrin and polyoxyethylenes, liq. detergents contg. anionic surfactants and, for improved rinsing from hard surfaces)  
 IT Detergents  
 (liq., contg. anionic surfactants and additives for improved rinsing from dishes and hard surfaces)  
 IT 75-21-8D, reaction products with pentaerythritol monoalkyl **ether**, epichlorohydrin, and amines 106-89-8D, reaction products with polyoxyethylenes and amines 107-15-3D, reaction products with epichlorohydrin and polyoxyethylenes 112-27-6D, reaction products with

epichlorohydrin and amines 115-77-5D, monoalkyl **ethers**,  
 ethoxylated, reaction products with epichlorohydrin and amines  
 124-22-1D, reaction products with epichlorohydrin and polyoxyethylenes  
 7664-41-7D, reaction products with epichlorohydrin and polyoxyethylenes  
**25322-68-3D**, reaction products with epichlorohydrin and amines  
 25497-48-7D, reaction products with epichlorohydrin and polyoxyethylenes  
 RL: USES (Uses)  
 (liq. detergents contg. anionic surfactants and, for improved rinsing  
 from hard surfaces)

L40 ANSWER 42 OF 42 CAPLUS COPYRIGHT 2003 ACS

ACCESSION NUMBER: 1976:107441 CAPLUS  
 DOCUMENT NUMBER: 84:107441  
 TITLE: Multi-block polyacetal copolymer surfactants  
 INVENTOR(S): Langdon, William K.  
 PATENT ASSIGNEE(S): BASF Wyandotte Corp., USA  
 SOURCE: U.S., 6 pp.  
 CODEN: USXXAM  
 DOCUMENT TYPE: Patent  
 LANGUAGE: English  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

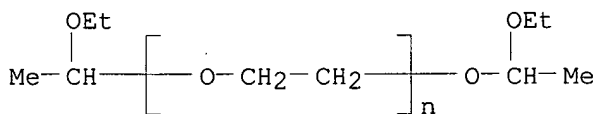
PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 3931337	A	19760106	US 1974-498315	19740819
CA 1072583	A1	19800226	CA 1975-233523	19750815
PRIORITY APPLN. INFO.:			US 1974-498315	19740819

AB Polyethylene glycol [25322-68-3] or polypropylene glycol (I) [25322-69-4] was treated with EtOCH:CH<sub>2</sub> [109-92-2] to prepare EtOCHMeO(CH<sub>2</sub>CHRO)<sub>n</sub>CHMeOEt (II) (R = H or Me), and the II were coupled with distn. of alkyl acetals to prep. block polymers or copolymers useful as surfactants. Thus, 1502 g I (mol. wt. 425) contg. 0.2 ml MeSO<sub>3</sub>H was treated during 85 min at 35-7.degree. with 476 g EtOCH:CH<sub>2</sub> to prep. II (R = Me) [58546-76-2] which (588 g) was heated from 28.degree./3 mm to 80.degree./3 mm to distill acetal, giving 492 g surfactant. The amt. of acetal removed corresponded to the linking of 3 II units by acetal links.

IT **58496-25-6**  
 RL: USES (Uses)  
 (transacetalized, surfactants)

RN 58496-25-6 CAPLUS

CN Poly(oxy-1,2-ethanediyl), .alpha.-(1-ethoxyethyl)-.omega.-(1-ethoxyethoxy)- (9CI) (CA INDEX NAME)



IC C07C  
 NCL 260615000A  
 CC 46-3 (Surface Active Agents and **Detergents**)  
 ST polyoxyalkylene block polyacetal surfactant; vinyl ether acetalization  
 polyoxyalkylene  
 IT Surfactants  
 (polyoxyalkylene polyacetal block compds.)  
 IT 25322-68-3 25322-69-4

RL: RCT (Reactant); RACT (Reactant or reagent)  
(reaction of, with ethyl vinyl ether)

IT 109-92-2

RL: RCT (Reactant); RACT (Reactant or reagent)  
(reaction of, with polyalkylene glycols)

IT **58496-25-6** 58546-76-2

RL: USES (Uses)  
(transacetalized, surfactants)

## WEST Search History

DATE: Monday, January 27, 2003

<u>Set Name</u> side by side	<u>Query</u>	<u>Hit Count</u>	<u>Set Name</u> result set
	<i>DB=JPAB,EPAB,DWPI; PLUR=YES; OP=ADJ</i>		
L6	(\$2capped) same (polyoxyalkylate\$3 or poly\$6eneoxide)	7	L6
	<i>DB=USPT; PLUR=YES; OP=ADJ</i>		
L5	l2 and L4	56	L5
L4	(polyoxyalkylate\$3) or (poly\$6eneoxide)	3719	L4
L3	l1 and l2	1	L3
L2	(510/356)!.CCLS. or 510/413.ccls. or 510/421.ccls. or 510/475.ccls. or 510/535.ccls.	2485	L2
L1	(\$2capped) same (polyoxyalkylate\$3 or poly\$6eneoxide)	54	L1

END OF SEARCH HISTORY